

A SURVEY OF SELECTED OIL COMPANIES IN OKLAHOMA  
TO DETERMINE REQUIREMENTS AND PRACTICES IN EMPLOYING  
ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS

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By

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Bachelor of Science

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Stillwater, Oklahoma

1949

Submitted to the Faculty of the Graduate School of  
the Oklahoma Agricultural and Mechanical College  
in Partial Fulfillment of the Requirements  
for the Degree of  
MASTER OF SCIENCE

1950

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#### ACKNOWLEDGMENT

The author wishes to acknowledge his indebtedness and to express his thanks to the following: Mr. Robert Lowry, Department of Business Education, whose advice and guidance in the pursuit of this investigation were invaluable; the fourteen oil company personnel managers who gave so generously of their time and information; Mr. Edward C. Burris, Assistant Dean of the Division of Commerce, Mr. B. F. Harrison, Head of the Department of Accounting, and Mr. Gordon Culver, Stillwater High School, for their advice and help in the preparation of certain aspects of the study; Mrs. Emily Suman, Commerce Librarian, for her helpful assistance in locating library reference materials; Mrs. Marie Bates, Commerce Division Secretary, for her help in the preparation and multi-graphing of the interview schedule; and my wife for her constant encouragement and helpful assistance in tabulating the data.

E. J. H.

## CHAPTER I

### INTRODUCTION

The business education curriculum of the public schools trains youth to fill positions in the business world. Through joint effort with businessmen, business educators are able to determine what duties are performed in different business occupations, and from this information to include in business education courses the necessary fundamentals of these occupational fields. In this way business education may work in the light, toward known goals, with the employers of their trainees as counselors.

It is useless to offer a wide variety of vocational courses if people who take these courses cannot use the training to gain and hold employment. Over a period of years, educators have attempted through research and other contacts to accumulate data on business occupations so that training institutions may satisfy the demands of business. The practice of surveying business communities and analyzing business occupations will need to be extended by business education to determine the requirements of employees in that area and probable demands upon prospective employees by present and future jobs.<sup>1</sup>

The investigator in this study has surveyed fourteen selected oil companies in Oklahoma to accomplish the following objectives: (1) to

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<sup>1</sup> Ira W. Kibby and William R. Blackler, "The Relationship of Business to Business Education," The Nation Business Education Outlook, Sixth Yearbook, National Commercial Teachers Federation, 1940, pp. 144-145.

determine whether the training given by schools has been satisfying the minimum requirements in the accounting and bookkeeping field, (2) to ascertain the minimum requirements specified for the beginning worker in the accounting and bookkeeping field, (3) to determine the employment possibilities for graduating students in the accounting and bookkeeping field, and (4) to secure occupational information for high school and college students who are interested in the accounting and bookkeeping field.

Through this study information will be made available to the students of accounting and bookkeeping and others who wish to better prepare themselves for employment with the oil companies of Oklahoma. The results of the study should assist students in determining which points should be given greatest emphasis in their classwork and outside activities. Youth of high school age and college graduates should be provided with a better knowledge of the requirements they will be expected to meet when they enter the business world.

Statement of the Problem. The purpose of this study is to gather data pertaining to the minimum employment requirements for new accounting and bookkeeping employees in selected oil companies of Oklahoma and to analyze and interpret these data in such a manner that they may be helpful to students, to instructors of college accounting courses, and to teachers of bookkeeping in high schools situated near oil company headquarters. Specifically, the study seeks to answer the following questions.

1. Does the instruction and training given by State colleges and high schools located near oil company headquarters adequately prepare students to enter employment with oil companies as accountants, accounting clerks, or record keepers? If not, in what areas is the training deficient?



2. What special training, if any, that is peculiar only to the oil industry should be given to prospective accounting and bookkeeping employees by high schools located in the vicinities of oil companies and by colleges?

3. How many people are employed as accountants, accounting clerks, or record keepers by the selected oil companies?

4. During a normal business year, how many new accountants, accounting clerks, and record keepers do the selected oil companies employ? Will this number change for any reason during the next 5 years?

5. What are the minimum educational qualifications required of new accountants, accounting clerks, and record keepers?

6. What experience qualifications, if any, are required of new accountants, accounting clerks, and record keepers?

7. What duties are performed by new accountants, accounting clerks, and record keepers?

8. Are vacancies for accountants, accounting clerks, and record keepers filled by new employees or are they filled by promoting or shifting present employees?

9. What methods are followed in employing new accountants, accounting clerks, and record keepers?

10. Do the selected companies offer any type of assistance to accountant, accounting clerk, and record-keeper employees who wish to continue their education?

Scope and Delimitation. The data used in this study were obtained through personal interviews with personnel managers or accounting department heads of fourteen oil companies located in the state of Oklahoma. The oil companies are situated in the north central and northeastern



sections of the state and are considered by the investigator to be representative of the majority of oil companies in Oklahoma.

Geographic locations of the oil companies included in this survey are as follows:

<u>Number of Companies Surveyed</u>	<u>Location</u>
11	Tulsa
2	Bartlesville
1	Ponca City
—	
Total 14	

The accountant, accounting clerk, and record-keeper positions were selected as positions in which a beginning worker in the accounting and bookkeeping field might find employment with an oil company. It may be assumed that in many cases the upper-level positions in accounting departments are filled by promotion within the companies, while the machine operator positions require no specific accounting or bookkeeping training; therefore, jobs such as these were eliminated, and the survey was restricted to the employment requirements for beginning accountants, accounting clerks, and record keepers.

Opinions of the personnel managers and accounting department heads are reflected in some of the data compiled in this survey. Questions 1, 2, 10, and 11 in the interview schedule<sup>2</sup> are subjective in nature and call for expression of personal opinion. The remainder of the questions are objective; and the data furnished in reply were derived from policies, records, and procedures of the selected oil companies.

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<sup>2</sup> See Appendix.

The accountants, accounting clerks, and record keepers were not interviewed to determine their opinions concerning deficiencies in their pre-employment training.

Definitions. An examination was made of the definitions of many accounting and bookkeeping positions in an effort to select definitions which would fit the actual duties performed by a majority of accounting and bookkeeping personnel in the selected oil companies. After consultation with the Head of the Department of Accounting and the Assistant Dean of the Division of Commerce, Oklahoma A. and M. College, both of whom have contacts with the selected oil companies in placing graduates in accounting positions, the definitions given in the Dictionary of Occupational Titles<sup>3</sup> were selected for use in this survey. These definitions were used verbatim to identify the accountant, accounting clerk, and record keeper.

Accountant - Devises or executes previously devised accounting systems to meet the needs of a particular concern; prepares financial statements, audits books, and does other accounting work as business requires; assumes responsibility for accuracy of the books after the audit.<sup>4</sup>

Accounting Clerk - Performs the more routine calculating, typing and posting duties necessary in accounting: checks items on various reports, summarizing and posting the data to designated books; performs a variety of other clerical duties, such as making up invoices or monthly statements to be sent to customers, preparing pay rolls, verifying the company bank account, keeping files of various records, making up a periodic report of the company's business activities, and listing and checking detail as instructed.<sup>5</sup>

Record Keeper - Keeps a record of and works with only one phase or section of a complete set of records pertaining to business transactions, such as the accounts receivable or the accounts payable

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<sup>3</sup> Dictionary of Occupational Titles, Division of Standards and Research, United States Government, June, 1939.

<sup>4</sup> Ibid., p. 2.

<sup>5</sup> Ibid.

section, performing other bookkeeping duties . . . . May be specifically designated according to section of records kept, as Accounts-Payable Bookkeeper; or Accounts-Receiveable Bookkeeper.<sup>6</sup>

The terms beginning employees and new employees are used synonymously in this study to designate employees that are newly employed by the company, except in cases where it is definitely stated that the employees are promoted or shifted to other positions.

Importance of the Study. In many instances the oil companies are a source of employment for the business education graduates of the high schools and colleges in Oklahoma. The oil companies have large staffs of employees, and each year many office positions become available to Oklahoma college and high school graduates.

One of the largest departments in each of the oil companies is the accounting department, which handles a wide assortment of transactions. Efficient performance of duties assigned to the personnel in these departments calls for knowledges and skills which schools provide.

Prior to beginning this study, the investigator had sample discussions with a personnel manager and an accounting department head in two of the selected oil companies in regard to the importance of the proposed survey. It was their expressed opinion that a need existed for the compilation of the data obtained in this survey.

With regard to surveys of business occupations and employment requirements in a local community, Herbert A. Tonne says:

Local surveys can, if properly used, help fill out the picture of the training needs that the high school and post-high school business-training facilities must render. It is often desirable to set up a local survey of business education. When a survey is well conducted, it may have results similar to those already known. Yet it makes the investigator himself more aware of the nature of

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<sup>6</sup> Ibid., p. 85.



his local community, and it gives him relationships with the local businessmen that might otherwise be difficult to obtain. Such surveys also make the businessman aware not only of the difficulties of the high school but also of the very considerable contributions that the school is rendering.<sup>7</sup>

Ira W. Kibby and William R. Blackler stress the necessity of business educators working with business leaders in improving business education.

They say:

In improving the program in business education with a view to attaining greater individual adjustment and increased usefulness to the business world, teachers of business subjects do well to become acquainted with businessmen and their methods, and to study the techniques used by business. In so doing, the educator will observe the advantages that the business firm gains from the application of scientific method to management problems. In addition the working relationships developed during such contact and study may prove mutually beneficial to members of both business and business education.<sup>8</sup>

Of the need for the collection of information in the bookkeeping field, Harold F. Cottingham says:

The need for current local information in relation to bookkeeping is important since the employment opportunities and working conditions have changed in recent years. . . . machine innovations have influenced the nature of the tasks carried out by those employed as "bookkeepers," making it necessary for a student considering this occupation to conduct a thorough investigation into its many phases.<sup>9</sup>

The number of accounting graduates of Oklahoma Agricultural and Mechanical College—and, doubtless of other colleges and high schools in the state—who seek employment with oil companies as beginning accountants, accounting clerks, and record keepers indicates that this study is needed in order that future accounting graduates and the institutions in which they will receive their training may know the opportunities and requirements for employment in the offices of oil companies.

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<sup>7</sup> Herbert A. Tonne, Principles of Business Education, p. 120.

<sup>8</sup> Ira W. Kibby and William R. Blackler, "The Relationship of Business to Business Education," The National Business Education Outlook, Sixth Yearbook, National Commercial Teachers Federation, 1940, p. 143.

<sup>9</sup> Harold F. Cottingham, "Occupational Information for Those Interested in Bookkeeping," UBEA Forum, (March, 1948), p. 47

Sources of Data. The interview technique of the normative-survey method of research was used in gathering primary data regarding the initial employment requirements of oil companies for accountants, accounting clerks, and record keepers.

From each company the investigator collected, by means of a personal interview with either the personnel manager or the accounting department head, information concerning the company's specific requirements in employing new accountants, accounting clerks, and record keepers, and from these data this study was made.

Literature and research studies in the fields of business education, applied and industrial psychology, and personnel management were examined to gather secondary data.

Method of Research. The interview technique of the normative-survey method of research was selected as the most suitable for gathering the data necessary for the study.

Carter V. Good, A. S. Barr, and Douglas E. Scates say, "Normative-survey research is directed toward ascertaining the prevailing conditions."<sup>10</sup> Of the interview technique, these authors say:

By means of the interview it is possible to secure many data that cannot be obtained through the less personal procedures of distributing a reply blank. People generally do not care to put confidential information in writing; they may want to see who is getting the information and receive guarantees as to how it will be used. . . . Again, the interview permits the interviewer to gain an impression of the person who is giving the facts, to form some judgment of the truth in the facts, and to "read between the lines," things that are not said. Finally the interview affords an opportunity for the interviewer to give information and to develop certain attitudes on the part of the respondent.<sup>11</sup>

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<sup>10</sup> Carter V. Good, A. S. Barr, and Douglas E. Scates, The Methodology of Educational Research, p. 287.

<sup>11</sup> Ibid., p. 378.

Leonard V. Koos, in his book, The Questionnaire in Education, recommends the interview technique in saying, "Wherever possible, it is preferable to use the oral questionnaire—that is, the interview—to the written questionnaire."<sup>12</sup>

Procedure. In assembling information for use in this study, related theses and business education literature were examined. Since this study was to be an occupational survey of employment requirements, related literature which might be helpful in establishing procedures was carefully studied. A survey by Gordon Culver <sup>13</sup> of the employment standards required of beginning secretaries and stenographers was found to be representative of the occupational survey type of research employing the interview technique. Working from an interview schedule prepared by Culver, numerous parts of which were adapted for use in the present study, the investigator drafted a tentative interview schedule. The tentative schedule was presented to the Chairman of the Thesis Committee for criticism; and, in conformance with suggestions received, a revised schedule was prepared. The revised interview schedule was presented to the Head of the Department of Accounting and to the Assistant Dean of the Division of Commerce for further criticism. Following these conferences, the revised schedule was submitted to the Chairman of the Thesis Committee for final approval. The final interview schedule, a copy of which is included in the Appendix, <sup>14</sup> was then multigraphed.

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<sup>12</sup> Leonard V. Koos, The Questionnaire in Education, p. 161.

<sup>13</sup> Gordon F. Culver, "A Survey of Selected Oil Companies in Oklahoma to Determine Minimum Employment Standards Required of Beginning Secretaries and Stenographers." Unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, 1949.

<sup>14</sup> See Appendix.



The fourteen companies studied were those included in Culver's survey, with two exceptions. One company did not employ a sufficient staff of accounting employees to afford representative data; therefore, a company suggested by the Assistant Dean of the Division of Commerce was included to replace it. The other company which had been included in Culver's survey was visited by the investigator on three separate occasions. At the time of the first visit, the personnel manager could not fill out the interview schedule; therefore, the purpose of the survey was explained and a form was left to be filled out and mailed to the investigator within a week. After waiting two weeks, the investigator again visited this company for the purpose of obtaining a reply. As the personnel manager was ill, a duplicate schedule was left with the receptionist. After another wait of two weeks, the investigator again called upon this company. At the time of this third visit, the investigator was informed that the company could not provide the data requested.

Culver compiled the list of oil companies from two sources:

1. Companies suggested by the Head of the Department of Secretarial Administration that were known to have personnel directors or office managers active in the National Office Management Association; and
2. Companies suggested by the Assistant Dean of the Division of Commerce were included because each year many graduates of the Division of Commerce gain employment with these companies.<sup>15</sup>

With the two exceptions noted, the same companies were included in this study in order to permit a comparison of results for two major business occupational fields.

As a preliminary measure, the investigator discussed interviewing procedures with, and secured a list of key people in each company from, the Assistant Dean of the Division of Commerce. This list was invaluable in arranging and conducting the interviews.

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<sup>15</sup> Culver, op. cit., p. 9.



The interviews were held on the dates indicated in the following schedule.

<u>Number of Companies Surveyed</u>	<u>Location</u>	<u>Date of Interview</u>
11	Tulsa	June 1-2-5, 1950
2	Bartlesville	June 9, 1950
1	Ponca City	June 12, 1950
—		
Total 14		

At one company in Tulsa, the personnel manager could not at the time complete the interview schedule with the investigator. In this case the purpose of the survey and the interview schedule was explained to the personnel manager, and a form was left with the agreement that it would be filled out at his convenience and mailed to the investigator. Since this form had not been received by June 23, the investigator traveled to Tulsa for a second interview with the personnel manager. It was found that the personnel manager had not completed the form; but in a short time, through joint effort by the personnel manager and the investigator, the schedule was filled out.

In conducting the interviews, the investigator called on the official directly responsible for the selection of accountants, accounting clerks, and record keepers. In every instance that person held the position of either personnel manager or accounting department head. Throughout the study accounting department heads and personnel managers will be designated by the title "personnel managers" as a convenient method of identification.

Data received from the interviews were tabulated. Tables were then constructed and interpretations made in keeping with the purpose of the study.

## CHAPTER II

### SURVEY OF RELATED LITERATURE

The literature surveyed includes selected research studies in the fields of business education, applied and industrial psychology, and personnel management. These studies were examined in an effort to find material pertaining to (a) occupational information for prospective workers in the accounting and bookkeeping field, and (b) the duties of workers in the accounting and bookkeeping field.

Research Study No. 1. The most important study for the purpose of determining the duties of bookkeepers, whether the knowledge necessary for performing these duties was learned in school or on the job, and the opinion of the bookkeeper as to where the duties should be learned--in school or on the job, or both--was made by Elvin S. Eyster.<sup>1</sup>

This study was limited to that group of office workers which deals with keeping, recording, and interpreting financial information. The recording clerk of the lowest order, the head accountant (executive), and the professional, public accountant and auditor were excluded.

The duties of bookkeepers were divided into eight main groupings in accordance with the composite judgment of 18 instructors of accounting and 25 practicing accountants. These eight groupings were: (1) Handling of business papers; (2) Financial duties; (3) Books of original entry; (4) Books of secondary entry; (5) Periodic work; (6) Auditing; (7) Interpretation; and (8) Cost accounting records and computations. An exhibit

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<sup>1</sup> Elvin S. Eyster, "An Analysis of the Duties of Bookkeepers," Unpublished Master's thesis, Indiana University, 1931.

of the eight groupings, with suggestive items listed under each, was sent to bookkeepers for complete listing. From 203 valid returns, a composite or final duty list of 414 bookkeeping duties was prepared. The final list was then given to 989 bookkeepers. Valid returns were secured for 436, or forty-two per cent, of these bookkeepers. Each bookkeeper was requested to check those duties which he performed on his present job for the following information: (1) whether performed daily or occasionally, (2) where learned--in school or on the job, and (3) where it should be learned--in school, on the job, or a combination of both.

Eyster's findings which are of interest in this study were:

1. The educational analysis of the bookkeepers reporting shows 51.87 per cent have training in advance of high school training, and 83.74 per cent have training for business. College graduates are not frequently found in bookkeeping positions.
2. The range of duties performed by an individual bookkeeper is from 5 to 274, with a median of 149.
3. Rank one of 414 duties of bookkeepers arranged in order of frequency of performance, was checked by 362 bookkeepers; and the lowest rank, 219, was checked by two bookkeepers. The duty representing the median rank of performance was checked by 138 bookkeepers.
4. Analysis of how often a bookkeeper performs a duty; that is, daily or occasionally; where the bookkeeper learned to perform the duty--in school or on the job; and, where, in the bookkeeper's judgment, it should be learned--in school, on the job, or by a combination of school and the job--is probably best displayed in connection with the frequency of performance ranking of each duty on the duty list.<sup>2</sup>

Research Study No. 2. Jane Shafer and George Seymour,<sup>3</sup> while graduate students in business education at Northwestern University during

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<sup>2</sup> Ibid., pp. 157, 161.

<sup>3</sup> Jane Shafer and George Seymour, "Vocational Information for Prospective Bookkeepers and Accountants," The Business Education World, February, 1946, pp. 310-312.

the summer of 1944, prepared pertinent occupational information for prospective bookkeepers and accountants in answer to questions adapted from a Monograph by J. Anthony Humphreys.<sup>4</sup> The following information of interest in this study was prepared:

1. Activities range from keeping the simplest records, to the preparation and interpretation of complicated financial reports.
2. Tasks and responsibilities in a large office are limited to one or a very few of the following items:

Keeping detailed records of accounts receivable, accounts payable, expense accounts, maintenance, and depreciation.  
 Recording cash transactions.  
 Making miscellaneous entries.  
 Preparing financial statements.  
 Recording adjusting and closing entries.  
 Posting by machine.  
 Using special machines for sorting and other operations.

3. Special abilities required, in order of importance:

Accuracy, thoroughness, ability to organize materials, memory for detail, skill in routine memorizing, mathematical, dexterity of fingers and arms, executive, scientific.

4. The training necessary to develop the required skills, knowledges, and attitudes may be acquired in:

High school commercial courses.  
 Business school commercial courses.  
 College or university commerce courses.  
 Apprenticeship in accounting firms.  
 Night school or correspondence courses.

5. The length of training required to obtain the necessary skills, knowledges, and attitudes is:

One year high school bookkeeping as a good foundation.  
 Two years' college accounting, which gives access to very desirable jobs.  
 Completion of college accounting courses and advances study in related subjects which prepare for C. P. A. examinations and for most desirable and high-salaried positions.

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<sup>4</sup> J. Anthony Humphreys, Occupational Monograph No. 7, Science Research Associates Publication, "How To Choose a Career," 1939, pp. 13-17.



6. The occupation may be evaluated in general as a life career by:

Advantages:

- Permanent, accepted occupation.
- Excellent chances for advancement.
- Many chances to find educational opportunities in the field.
- Opportunities for originality.

Disadvantages:

- Sedentary.
- Easy to get into a rut.
- Poor pay for the mediocre positions.

Research Study No. 3. Frank S. Endicott,<sup>5</sup> Director of Placement, Northwestern University, Evanston, Illinois, in an attempt to secure from a large number of employers specific answers to questions relating to the employment of college graduates in business, made a number of surveys. His findings in these studies which are of interest in this study were:

1. Specific personal characteristics considered essential by employers are:

- The ability to get along with others (most frequently mentioned).
- Qualities of honesty and loyalty.
- Human relationships, with special emphasis on those qualities necessary in meeting and working with people.

2. High marks, special courses, and personality, in that order, ranked highest on a scale rating relative importance of certain factors relating to the employability of college graduates for accounting positions in 70 large companies.

3. Personality and high marks ranked highest on the same scale as above for bookkeeping positions.

4. Some of the adjustments which must be made after employment and for which the graduate is poorly prepared are classified under these four main headings:

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<sup>5</sup> Frank S. Endicott, "The Guidance and Counseling of Business Education Students," Fifth Annual Delta Pi Epsilon Lecture, delivered in Chicago, Illinois, December 27, 1946. Published by the South-Western Publishing Co., March, 1947.

Unrealistic attitude toward progress and what is required for advancement.

They expect too rapid advancement.

They fail to realize that they must contribute to the company by hard work and production.

They desire to avoid required routine tasks.

Unwillingness to start at or near the bottom.

Lack of understanding of desirable relationships with fellow workers and supervisors.

Difficulty in getting along with others and working as a member of a group.

Lack of tolerance of those who did not go to college.

Underestimation of the value of experience.

Inability to take criticism and suggestions.

Difficulty in making adjustment from college life to routine, detail, speed, and regular hours.

Inability to apply theory in practical situations.

5. Employers have these suggestions for business educators.

Provide more and better vocational guidance, using interest, aptitude and other tests.

A further development and extension of the cooperative plan.

More emphasis on fundamentals, basic courses, and broad general education.

More lectures by experienced business leaders.

More carefully planned programs for each individual student in terms of his needs and his strong points.

More emphasis upon public speaking, letter writing and "utilitarian English."

More and closer contact between business and higher institutions.

Summer employment in industry for counselors and professors.

Determine more clearly the purpose or purposes of higher education in relation to business and industry.

Better balance between technical and general courses.

Research Study No. 4. In surveying eighty-eight retail merchandise stores in Stillwater, Oklahoma, to obtain information concerning the bookkeeper and his duties, Moorman R. Work<sup>6</sup> reported the following findings which are of interest in this study:

1. Eighty-two per cent of the bookkeepers were women.
2. Managers in one-third of the retail merchandise stores kept the books, which were maintained within the business.

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<sup>6</sup> Moorman R. Work, "A Survey of Bookkeepers and Bookkeeping Systems in Selected Retail Merchandise Stores in the City of Stillwater," Unpublished Master's thesis, Oklahoma Agricultural and Mechanical College, 1949.

3. Approximately one-third of the female bookkeepers were employed in their first full-time jobs as bookkeepers at the ages of 17 and 18, and one male bookkeeper was employed at the age of 18. The remaining female and male bookkeepers were older than 18 when they were employed in their first full-time bookkeeping positions.

4. The rate of turnover was very high, for approximately three-fourths of the males and about one-half of the females have held their present jobs as bookkeepers for less than one year.

5. Seventy per cent of the stores required formal bookkeeping training, and of this number slightly over 65 per cent required the bookkeeper to have formal bookkeeping training above the high school level.

6. A knowledge of some other skill was required of the bookkeeper in approximately 75 per cent of the bookkeeping jobs.

7. Experience was required in obtaining employment as a bookkeeper in approximately 75 per cent of the retail merchandise stores.

Work's recommendations concerning bookkeepers and bookkeeping instruction in high schools which are of interest in this study were:

1. Students who are preparing for small business management should have fairly extensive bookkeeping training.

2. The student who is preparing for the field of bookkeeping should have a knowledge of, or training in, other fields--principally selling, stenography, or office management.

3. A work experience program for students who are training for bookkeeping jobs is advisable.



Research Study No. 5. James G. Brigham<sup>7</sup> investigated the industrial situation in Philadelphia to ascertain bookkeeping activities and clerical activities related to bookkeeping in the modern business office. The group studied were representative of the types of industry, kinds of clerical positions, age and sex of workers, and size of office staffs. The data received came from 154 offices, and were given by 327 people, who represented a population of 4,000 workers. These workers were employed in seven types of industries, and were spread over ten office occupations using 457 bookkeeping activities. The findings of interest in this study were:

1. The median office staff had 19 workers. Manufacturing used more bookkeepers, cost clerks, billing clerks, and calculator operators than other industries. Retailing used more ledger clerks and cashiers.
2. The age range of the group was from 17 to 77 years.
3. Two-thirds of the office workers were experienced, and one-third were inexperienced. The experienced workers had been in 184 former positions which involved bookkeeping. Managers were first, and bookkeepers were second, in length of business experience.
4. Of the entire group, 80 per cent had completed high school, 9 per cent had finished college, 32 per cent had had one year of business school, and 19 per cent had had a year in some other school.
5. Bookkeeping was first among the business education subjects studied; typewriting, second; office practice, third; and office machines, fourth.

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<sup>7</sup> James G. Brigham, "Bookkeeping Activities of the Business Office," National Business Education Quarterly, October, 1949, pp. 56-62.

Conclusions and recommendations concerning bookkeeping training were:

1. The specialized activities of office trades may be taught under four curriculums: bookkeeping, stenography, clerical practice, and office machines.
2. In a small office, bookkeeping records are prepared by one person; in a large office, they are made by a group of recording clerks.
3. Pupils going into recording work need a high school diploma. They require programs preparing for families of occupations rather than for initial positions.
4. Prospective office workers need training in the basic bookkeeping activities.

Research Study No. 6. The purpose of a study by Juliabel Strauch<sup>8</sup> was to find out the office duties actually performed by bookkeepers. From thirty questionnaires returned by office managers in the Pekin, Illinois, area, the following information was secured:

1. Those bookkeeping duties performed in from 50 per cent to 65 per cent of the offices were, in the order of frequency: (1) Recording transactions in the cash journal; (2) Recording transactions in the general journal; (3) Taking a trial balance; (4) Posting entries into ledger accounts; (5) Keeping withholding tax records; (6) Keeping detailed records of accounts receivable; (7) Preparing a profit and loss statement; (8) Keeping detailed records of expenses; (9) Sorting and checking invoices; (10) Recording transactions in the sales journal; and (11) Preparing monthly statements for customers.

2. Those duties performed in from 25 per cent to 49 per cent of the offices were, in order of frequency: (1) Recording transactions in the purchase journal; (2) Preparing a balance sheet; (3) Recording and posting adjusting and closing entries; (4) Closing accounts in the ledger;

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<sup>8</sup> Juliabel Strauch, "Do Bookkeepers Just 'Keep Books'?" The Journal of Business Education, June, 1950, pp. 15-16.

(5) Keeping state sales tax records; (6) Calculating trade discounts; (7) Sorting and checking bills; (8) Keeping detailed records of accounts payable; (9) Calculating interest on commercial papers; (10) Sorting and checking sales slips; and (11) Preparing a work sheet.

3. The most frequent of the bookkeeping duties was performed by bookkeepers in only 65 per cent of the offices. This was because many of the offices did not keep their books and use all steps of the bookkeeping cycle as these steps are taught in bookkeeping classes.

4. Bookkeepers use the adding machine in 57 per cent of the offices surveyed, and the bookkeeping machine in 33 per cent of the offices surveyed.

5. In 51 per cent of the offices the customers' statements are typed by the bookkeeper; and in 48 per cent, the financial statements are typed by the bookkeeper. Other typing duties performed by bookkeepers in 40 per cent or more of the offices are, in order of frequency:

(1) Addressing envelopes; (2) Composing simple letters on the typewriter; (3) Typing invoices; (4) Typing letters on letterhead paper; (5) Typing checks.

6. In many offices the performance of many miscellaneous duties rests upon the shoulders of the bookkeeper. These duties, performed in 30 per cent to 47 per cent of the offices are, in order of frequency:

(1) Keeping time records and preparing payrolls; (2) Answering the telephone and taking messages for the employer; (3) Filling out deposit slips and making deposits at the bank; (4) Ordering office supplies; (5) Cleaning and oiling typewriters; (6) Withdrawing money from the bank; (7) Receiving callers in the office; (8) Changing typewriter ribbons; (9) Sending telegrams; and (10) Making appointments for the employer.

Research Study No. 7. In 1941 Annie Marie Wuest<sup>9</sup> made an interesting survey of the duties that are performed by the bookkeepers in the business offices of San Marcos, Texas. This survey was conducted "to form proper contacts with the local businesses to determine what training should be given in school to fit the bookkeeper to the actual needs in business offices."

A check list containing 375 duties classified under seven groupings of bookkeeping duties was prepared by Wuest from her personal knowledge as a bookkeeping instructor, from the advice given by bookkeeping and accounting teachers, from suggestions by bookkeepers actually employed, and from analyses of bookkeepers' duties. The seven groupings of bookkeeping duties were: (1) Handling of business papers; (2) Financial duties; (3) Records of original entry; (4) Records of final entry; (5) Periodic work; (6) Mailing and filing duties; and (7) General clerical and supervisory duties.

The check list was then presented to forty-five bookkeepers employed in forty-two individual establishments. Thirty-nine valid returns were received.

The following is a summary of her findings which are of interest in this study:

1. According to positions the bookkeepers were classified as regular bookkeepers, cashier-bookkeepers, secretary-bookkeepers, chief clerks, accounts receivable clerks, and bookkeepers performing special bookkeeping duties. Of the thirty-nine bookkeepers reported in the survey, twenty-five were males, representing 64 per cent of the total number, and fourteen were females, representing 36 per cent of the total number.
2. The analysis of the bookkeepers' education shows that 22 per cent of all the bookkeepers are high school graduates, 17

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<sup>9</sup> Annie Marie Wuest, "An Analysis of the Duties of Bookkeepers," Unpublished Master's thesis, Southwest Texas State Teachers College, 1941.

per cent did not complete the high school training, and 61 per cent had college training. Of the bookkeepers 53 per cent had business education in business colleges. A large percentage of bookkeepers who had college training also had extensive business training.

3. The age range is from 19 to 66 for the males and from 23 to 50 for the females. The average age for the women is 35, and for the men 36.

4. A frequency of performance ranking of the 375 bookkeepers' duties by thirty-nine bookkeepers shows a range from thirty-five performing the duty of first rank to one performing the duty of lowest rank. Of the first one hundred duties of greatest frequency, approximately 70 per cent are bookkeeping duties, while the others might be performed either by the bookkeeper, secretary, or general clerk.

5. An analysis of the various bookkeeping duties reveals the fact that the duties in regard to handling of business papers and financial duties are the predominant kinds performed.

6. The majority of the duties were indicated as having been learned on the job.

7. This study revealed a general trend in specialized bookkeeping.<sup>10</sup>

Research Study No. 8. Etta S. Skene<sup>11</sup> analyzed bookkeeping activities in business occupations as a basis for determining the content of courses of study in bookkeeping for secondary schools. The data were collected by means of a check list dealing with bookkeeping activities and by personal interviews with office workers in the metropolitan area of New York, and in cities, towns, and rural communities of New Jersey, Oklahoma, Missouri, Illinois, Virginia, and Colorado. The 1930 United States Census report was used for comparative purposes.

Selected findings from Skene's study were:

1. Employees using bookkeeping knowledges are widely distributed among many kinds of businesses.

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<sup>10</sup> Ibid., pp. 68-70.

<sup>11</sup> Etta S. Skene, "Occupational Analysis As a Basis of Bookkeeping Curricula of Public Secondary Schools," Doctor's dissertation, New York University, 1934, as abstracted by Benjamin R. Haynes and Clyde W. Humphrey, Research Applied to Business Education, pp. 140-141.

2. General age trends in the 1930 United States Census for clerical occupations and age trends in this study tend to agree.
3. Of 537 activities undertaken by those interviewed, 368 activities do not warrant formal school instruction. Of a total of 84 activities undertaken primarily by bookkeepers, 30 do not warrant formal school instruction. Of the total number of activities of bookkeepers, 159 items should be taught to all.
4. General clerks and ledger clerks should be taught how to operate calculating and adding machines.
5. Typical high school bookkeeping textbooks are satisfactory for vocational bookkeeping, but they are not satisfactory for nonvocational bookkeeping activities.<sup>12</sup>

Other Related Studies. The Commercial Education Study Committee<sup>13</sup> of the Pittsburgh Public Schools, with the cooperation of the Pittsburgh chapter of the National Office Management Association, surveyed the office duties and employer recommendations for improved high school training in the Pittsburgh area. This study was made for the purpose of improving the high school curriculum so that the proper clerical training could be provided. The survey covered a total of 464 record keepers, which included—in addition to 371 bookkeepers—billing clerks, cashiers, inventory clerks, and payroll clerks. The results of the study were collected into tables showing the frequency of duties performed by workers in bookkeeping and other record-keeping occupations.

The current bookkeeping practices in relation to the high school commercial bookkeeping course were studied by Dewey Rowland<sup>14</sup> in 1928, and his findings of interest in this study were:

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<sup>12</sup> Ibid., p. 141.

<sup>13</sup> Commercial Education Study Committee of the Pittsburgh Public Schools, "Survey of Office Duties and Employer Recommendations for Improved High School Training," The Journal of Business Education, May, 1949, p. 28 and January, 1949, p. 26.

<sup>14</sup> Dewey Rowland, "Current Bookkeeping Practice in Relation to the High School Commercial Bookkeeping Course," Master's thesis, University of Southern California, as abstracted by Benjamin R. Haynes and Jessie Graham, Research in Business Education, pp. 145-146.

1. More women than men are employed for bookkeeping and clerical work.
2. Two types of bookkeeping courses should be given: One to meet the needs of those who intend to take additional courses in preparation for accounting work, and the other, a short general elementary course giving the principles of debit and credit, etc., for general office clerks.

A study concerning executives' bookkeeping duties was made by Ontijo Richard Wessels.<sup>15</sup> He found that:

1. A general knowledge of bookkeeping is essential to executives and instruction should be provided for this need.
2. Interpretation or administrative bookkeeping forms the major part of the executive's work in bookkeeping.
3. A knowledge of these routine tasks, which take a major part of the time used in instruction of bookkeeping, is not essential to the executive and therefore the time of instruction can be reduced.

In 1933 Benjamin I. Shapiro<sup>16</sup> studied the duties of bookkeepers employed in business establishments of Philadelphia. In his study Shapiro attempted to discover whether the training in bookkeeping satisfied the requirements of business in Philadelphia.

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<sup>15</sup> Ontijo Richard Wessels, "A Job Analysis of Bookkeeping Duties of Executives, Unpublished Master's thesis, University of Iowa, 1932, as quoted by Wuest, op. cit., pp. 16-17.

<sup>16</sup> Benjamin I. Shapiro, "A Study of the Duties Performed by Bookkeepers Employed in Business Establishments of Philadelphia," Unpublished Master's thesis, Temple University, 1933, as quoted by Wuest, op. cit., p. 17.



## CHAPTER III

## EMPLOYMENT REQUIREMENTS OF OIL COMPANIES

Chapter III summarizes data gathered by the investigator in interviews with the personnel managers of 14 oil companies in Oklahoma. The data pertain to the status and employment requirements of accountants, accounting clerks, and record keepers in the oil companies.

Distribution of Employees in Companies Surveyed

The 14 oil companies included in this study employ a total of 1,708 accountants, accounting clerks, and record keepers. Of this total, 330 are accountants, 775 are accounting clerks, and 603 are record keepers. In a majority of the companies these figures were derived from payrolls or other company records; but in several cases the figures are approximations by the personnel manager. Table I shows the distribution of accountants, accounting clerks, and record keepers among the 3 cities in which the oil companies are located.

One company in Ponca City employs a total of 456 accountants, accounting clerks, and record keepers. Of the 39 accountants employed by this company, all are men; of the accounting clerks, 177 are men and 25 are women; of the record keepers, 170 are men and 45 are women. Two companies in Bartlesville employ a total of 375 accountants, accounting clerks, and record keepers. Of the accountants, 34 are men and 5 are women; of the accounting clerks, 124 are men and 25 are women; of the record keepers, 107 are men and 30 are women. Eleven companies in Tulsa employ a total of 877 accountants, accounting clerks, and record keepers. Of the accountants, 197 are men and 5 are women; of the accounting clerks, 348 are men and 76 are women; of the record keepers, 141 are men and 110 are women.

TABLE I

GEOGRAPHICAL DISTRIBUTION OF 1708 ACCOUNTANTS, ACCOUNTING  
CLERKS, AND RECORD KEEPERS EMPLOYED BY 14 OIL COMPANIES

Location	Number of Oil Companies Surveyed	Number of Employees						Total
		Accountants		Accounting Clerks		Record Keepers		
		Men	Women	Men	Women	Men	Women	
Ponca City	1	39	--	177	25	170	45	456
Bartlesville	2	84	5	124	25	107	30	375
Tulsa	<u>11</u>	<u>197</u>	<u>5</u>	<u>348</u>	<u>76</u>	<u>141</u>	<u>110</u>	<u>877</u>
Total	14	320	10	649	126	418	185	1708

This table should be read as follows: One company located in Ponca City employs a total of 456 accountants, accounting clerks, and record keepers. Of the 39 accountants employed by this company, all are men; of the accounting clerks, 177 are men and 25 are women; of the record keepers, 170 are men and 45 are women.

Minimum Age at Which Employees Will Be Employed

Accountants. Only 2 of the 14 companies employ new accountants. Of these 2 companies, 1 has a minimum age requirement of 25 years for either men or women, while the other company will employ any person who has the necessary abilities, regardless of age. It will be shown in Table VII that the remaining companies fill vacancies for accountants by promoting or shifting present employees.

Accounting Clerks. Five of the 14 personnel managers reported that their companies do not employ beginning accounting clerks; therefore, they do not have a minimum age requirement for new accounting clerks. Seven personnel managers said that their companies employed new accounting clerks when vacancies could not be filled by present employees, and the remaining 2, that only new employees are employed to fill accounting clerk vacancies. There was considerable variation among the companies as to the minimum age required of new men accounting clerks. Of the 9 personnel managers representing companies that employ new accounting clerks, only 1 said that his company employs accounting clerks who are 19 years old. Three specified that accounting clerks must be at least 20 years old; 1, 23 years old; 1, 25 years old; and 2, no minimum age requirements. The average minimum age required for beginning men accounting clerks is 21.14 years.

Of the 9 companies that will employ beginning accounting clerks, only 5 will employ women in this position. One company has no minimum age requirement for women, while each of the other 4 companies have a different minimum age requirement for women. The minimum ages specified are 19, 20, 21, and 25. The average minimum age required for new women

accounting clerks is 21.25 years.

Record Keepers. All of the companies employ men as new record keepers, and 12 of the 14 companies employ women as new record keepers.

Seven personnel managers said that the minimum age requirement for new men record keepers in their companies is 18 years. Three personnel managers stated that they do not have a required minimum age for beginning men record keepers, and the remaining 4 companies have minimum age requirements of 19, 20, 21, and 24 years for their beginning men record keepers. The average minimum age specified for new men record keepers is 19.06.

Of the 12 companies that employ new women record keepers, 1 requires a minimum age of 17; 5 require a minimum age of 18; 1 requires a minimum age of 19; 1 requires a minimum age of 20; 2 require a minimum age of 21; and the remaining 2 do not have a minimum age requirement. The average minimum age for beginning women record keepers is 18.93 years.

Summary. These data seem to indicate that, as far as age is concerned, positions as record keepers with oil companies are available to high school graduates while the accounting clerk positions are available to persons with some training above the high school level.

Data on minimum age requirements are listed in detail in Table II.

#### Marital Status Preferred

Accountants. Of the 2 companies that employ new accountants, 1 requires that new men accountants be married and that new women accountants be single. The personnel manager for the other company stated that the marital status for beginning accountants--both men and women--could be either married or single.

Accounting Clerks. In the 9 companies that employ new accounting



TABLE II  
MINIMUM EMPLOYMENT AGE REQUIRED OF ACCOUNTANTS, ACCOUNTING CLERKS,  
AND RECORD KEEPERS AS REPORTED BY PERSONNEL MANAGERS OF 14  
OIL COMPANIES

	Minimum Employment Age Specified For:																					
	Men											Women										
	Age (Years)											Age (Years)										
	18	19	20	21	22	23	24	25	None -	Average Age	17	18	19	20	21	22	23	24	25	None -	Average Age	
Accountants								1	1	25.00									1	1	25.00	
Accounting Clerks			1	3	1		1		1	2	21.14			1	1	1			1	1	21.25	
Record Keepers	7	1	1	1			1		3	19.06	1	5	1	1	2				2		18.83	

This table should be read as follows: Two of the fourteen companies will not employ male accountants; one company requires a minimum age of 25, and the other does not specify a minimum age. The average minimum age requirement for beginning men accountants is 25 years.

clerks, 2 personnel managers reported that new men accounting clerks in their companies must be married; and the remaining 7 personnel managers reported that their companies have no preference as to marital status. Two of the 5 companies that employ new women accounting clerks require women who are single; and the remaining 3 companies have no preference as to marital status.

Record Keepers. One personnel manager said that his company requires single men as beginning record keepers; 2 personnel managers reported that their companies employ only married men in the position of record keeper; and the remaining 11 companies express no preference as to marital status. Personnel managers of the 12 companies that employ women as new record keepers reported that their companies have no preference concerning marital status.

Summary. Several personnel managers reported that they attempt to employ single men in the lower-pay positions, since they believed that a married man could not adequately support a family on the salaries for these positions. With these exceptions, it may be concluded from these data that, in a majority of the oil companies, the marital status of beginning accountants, accounting clerks, and record keepers--both men and women--is not significant to those seeking employment. Data on marital status requirements are listed in Table III.

#### Minimum Education Requirements

Personnel managers of the 14 oil companies were asked to indicate the minimum education required for beginning accountants, accounting clerks, and record keepers in their companies. Data on minimum education requirements are shown in Table IV.

Accountants. The only 2 companies that employ new accountants

TABLE III

MARITAL STATUS PREFERRED FOR BEGINNING ACCOUNTANTS,  
ACCOUNTING CLERKS, AND RECORD KEEPERS

	No. of Personnel Managers Reporting	Marital Status Preferred For:					
		Men			Women		
		S	M	E	S	M	E*
Accountants	2		1	1	1		1
Accounting Clerks	9		2	7	2		3
Record Keepers	14	1	2	11			12

\* Abbreviations: S-Single; M-Married; E-Either

This table should be read as follows: In the two companies that employ new accountants, one personnel manager reported that married men are preferred as accountants; and the other reported that the marital status of men accountants could be either married or single.

TABLE IV

MINIMUM EDUCATION REQUIREMENTS SPECIFIED FOR EMPLOYMENT  
OF ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS

	No. of Personnel Managers Reporting		Educational Level Specified									
			High School		Business		Junior		Business College		College	
			Graduate		College		College		Graduate or Junior		Graduate	
	M	W	M	W	M	W	M	W	M	W	M	W*
Accountants	2	2									2	2
Accounting Clerks	9	5	1	1			1	1	4	3	3	-
Record Keepers	14	12	11	9							3	3

\* Abbreviations: M-Men; W-Women

This table should be read as follows: Two personnel managers reported college graduation required of men and women for employment as accountants. One personnel manager reported high school graduation required of men and women for employment as accounting clerks; one personnel manager reported junior college graduation required of men and women for employment as accounting clerks. Four personnel managers reported either business college or junior college graduation of men and three of women for employment as accounting clerks. Three personnel managers reported college graduation required of men for employment as accounting clerks.



require college graduation for both men and women.

Accounting Clerks. Of the 9 companies that employ new accounting clerks, 4 specify either business college or junior college graduation for their new men accounting clerks. Three companies have a requirement that new men accounting clerks be college graduates. One company requires junior college graduation; and the remaining company requires high school graduation for beginning men accounting clerks.

With regard to new accounting clerks, 3 of the 5 companies that employ women to fill these positions require either junior college or business college graduation; 1 company requires junior college graduation; and the other company requires high school graduation.

Record Keepers. Eleven companies require their beginning men record keepers to be high school graduates, and 3 companies employ only men record keepers who are college graduates. Nine of the 12 companies that employ women as beginning record keepers require that they be at least high school graduates. The 3 remaining companies require college graduation for employment as new record keepers. Three of the personnel managers reported that their companies require college graduation to fill positions of accounting clerks and record keepers in order to provide a reservoir from which future executives of their companies will come.

Summary. While these data indicate that, in general, high school graduates may be employed as beginning record keepers, and junior college or business college graduates may be employed as beginning accounting clerks; a majority of the personnel managers indicated that their companies are able to fill vacancies in all 3 classifications with college graduates under present labor-market conditions.

Distribution of New Accountants, Accounting Clerks, and Record Keepers Employed During a Business Year

The 14 companies included in the survey employ approximately 246 accountants, accounting clerks, and record keepers annually. Of this total, 11 are accountants, 92 are accounting clerks, and 143 are record keepers. The year 1949 was considered a normal business year by about one-third of the personnel managers for these companies; therefore, exact figures on the number of accountants, accounting clerks, and record keepers employed during this year were given. Others estimated the number that were newly employed by their companies during a normal business year.

Table V shows in detail the geographical distribution of new accountants, accounting clerks, and record keepers employed during a normal business year. The personnel manager for 1 company in Ponce City reported that his company figures a turnover of about 20 per cent in the record-keeping positions, or that 43 new record keepers are employed yearly. The other positions are filled by promotion from record-keeping positions or by transfer of present employees.

In the 2 companies at Bartlesville, an approximate total of 84 new accountants, accounting clerks, and record keepers are employed each year. Of this total, 10 are accountants, 59 are accounting clerks, and the remaining 15 are record keepers. The 11 companies surveyed at Tulsa employ a total of 119 new accountants, accounting clerks, and record keepers yearly. The personnel managers for the 1 company in Tulsa that employs new accountants reported that about 1 new accountant is employed each year. Seven of the 9 companies that employ new accounting clerks are located in Tulsa.

TABLE V

GEOGRAPHICAL DISTRIBUTION OF APPROXIMATE NUMBER OF NEW  
ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS  
EMPLOYED DURING A NORMAL BUSINESS YEAR

	Number of Oil Companies Reporting	Approximate Number Newly Employed During a Normal Business Year			Total
		Accountants	Accounting Clerks	Record Keepers	
Ponca City	1			43	43
Bartlesville	2	10	59	15	84
Tulsa	<u>11</u>	<u>1</u>	<u>33</u>	<u>85</u>	<u>119</u>
Total	14	11	92	143	246

This table should be read as follows: During a normal business year, one oil company located at Ponca City employs approximately 43 new record keepers.

The personnel managers for these companies stated that approximately 33 new accounting clerks are employed each year. Record keepers are employed by all companies in Tulsa. Approximately 85 new record keepers are employed by these companies yearly.

Summary. These data indicate that positions for accountants, accounting clerks, and record keepers are available during a normal year. The turnover is not high except in the record-keeping positions. The personnel managers of several of the companies stated that their companies desire to employ women in these positions because the chance for advancement is remote, the duties to be performed are routine, and most of the women employed use these jobs with the oil companies as stopgaps between high school and marriage.

Expected Trend in Newly Employed Accountants, Accounting Clerks, and Record Keepers During the Next 5 Years

Personnel managers were asked to indicate whether, in their opinions, the number of accountants, accounting clerks, and record keepers to be newly employed by their companies would change for any reason during the next 5 years. The data yielded by this question are summarized in Table VI.

Accountants. Personnel managers of the only 2 companies that employ new accountants reported that they expect no change in the number of new accountants to be employed by their companies during the next 5 years.

Accounting Clerks. In the 9 companies that employ new accounting clerks, 7 personnel managers indicated that no change is expected in the number of new accounting clerks to be employed during the next 5 years; 1, that an increase is expected; and the remaining 1, that a decrease is



TABLE VI

EXPECTED TREND IN NEWLY EMPLOYED ACCOUNTANTS, ACCOUNTING  
CLERKS, AND RECORD KEEPERS DURING THE NEXT 5 YEARS AS REPORTED BY  
PERSONNEL MANAGERS OF 14 OIL COMPANIES

	No. of Companies Reporting	No Change Expected	Increase Expected	Decrease Expected
Accountant	2	2		
Accounting Clerk	9	7	1	1
Record Keeper	14	11	1	2

This table should be read as follows: The only 2 companies that employ new accountants expect no change in the number of new accountants to be employed by those companies during the next 5 years.

expected.

Record Keepers. Of the personnel managers representing the 14 companies that employ new record keepers, 11 reported that no change is expected in the number of newly employed record keepers in the next 5 years; 1, that an increase is expected; and the other 2, that a decrease is expected.

Summary. The personnel managers that expect an increase in the number of new accounting clerks and record keepers employed by their companies during the next 5 years indicated that their companies are planning expansion programs and that an increased load of work will be placed on their accounting departments, necessitating the employment of a number of new accounting clerks and record keepers.

The reason given by the personnel managers representing companies that employ accounting clerks and record keepers for a decrease during the next 5 years is that their companies are stabilizing their operations; therefore, vacancies in the positions of accounting clerk and record keeper are not filled by employing replacements, but the duties are distributed among the remaining accounting department personnel.

How vacancies are filled

In order to determine how the oil companies fill their vacancies, personnel managers were asked whether vacancies in the positions of accountant, accounting clerk, and record keeper are filled in their companies by obtaining new employees, by promoting or shifting present employees, or by both of these methods.

Accountants. Each of the 14 companies fills vacancies for accountants by promoting or shifting their present employees; and only 2 companies, as a second choice, employ new accountants if none of their

present employees are qualified for the vacancy.

Accounting Clerks. Two of the 14 companies employ only new accounting clerks, and the other 12 companies promote or shift present employees in order to fill vacancies for the position of accounting clerk. Of these 12 companies, 7 employ new accounting clerks in filling accounting clerk vacancies that cannot be filled through the preferred method of promoting or shifting present employees.

Record Keepers. One-half of the companies fill all record-keeping vacancies by employing new record keepers; and the other half use both methods--promoting or shifting present employees and obtaining new employees--in filling these vacancies.

Data showing how vacancies for accountants, accounting clerks, and record keepers are filled by these companies are given in Table VII.

#### Promotional Possibilities

Promotional possibilities were determined by obtaining data concerning office positions from which new accountants, accounting clerks, and record keepers are promoted. In these positions, each company is counted separately for each position mentioned by the company's personnel manager.

Accountants. Table VIII shows from which office positions company employees are promoted to the position of accountant.

All 14 companies prefer to promote present employees to the position of accountant. Personnel managers for only 2 companies stated they would, as second preference, employ new personnel for these jobs. When vacancies for accountants are filled from within the company, 6 personnel managers state that they are filled by promoting accounting clerks; 2, by promoting clerks; 2, by promoting clerks (Intermediate); 2, by promoting senior

TABLE VII  
METHODS BY WHICH 14 OIL COMPANIES FILL  
VACANCIES FOR ACCOUNTANTS, ACCOUNTING CLERKS, AND  
RECORD KEEPERS

Vacancy	Method of Filling Vacancies		
	Promoting or Shifting Present Employees	Obtaining New Employees	Both
Accountant	12		2
Accounting Clerk	5	2	7
Record Keeper		7	7

This table should be read as follows: When filling vacancies for accountants, all 14 companies give first preference to present employees; only 2 companies, as a second preference, hire new employees to fill vacancies for accountants.



TABLE VIII  
OFFICE POSITIONS FROM WHICH COMPANY EMPLOYEES  
ARE PROMOTED TO POSITION OF ACCOUNTANT AS REPORTED BY  
PERSONNEL MANAGERS OF 14 COMPANIES

Office Positions	Number of Companies Reporting
Accounting Clerk	6
Clerk	2
Clerk (Intermediate)	2
Senior Clerk	2
Intermediate Clerk	1
Distribution Clerk	1

This table should be read as follows: The personnel managers of six companies reported that accountants in their companies are promoted from accounting clerks.

clerks; 1, by promoting intermediate clerks; and 1, by promoting distribution clerks.

Accounting Clerks. It was shown in Table VII that 12 of the 14 companies promote present employees to fill vacancies in the position of accounting clerk. Personnel managers of these 12 companies stated that present company employees are promoted to the position of accounting clerk from the following positions: Junior clerk and record keeper, each mentioned by 5 personnel managers; clerk (apprentice), clerk (intermediate), junior accountant, and from a training program, each mentioned by 1 personnel manager. These data are summarized in Table IX.

Record Keepers. Personnel managers for 7 of the 14 companies reported that present employees are promoted to the position of record keeper from the following positions: Mail clerk, mentioned by 3 personnel managers; junior clerk, mentioned by 2; and apprentice clerk, machine operator, messenger, office boy, and typist-clerk--each mentioned by 1 personnel manager. These data are summarized in Table X.

Positions to Which Present Accountants, Accounting Clerks and Record Keepers Are Promoted

In order to learn of the promotional possibilities for accountants, accounting clerks, and record keepers, the 14 personnel managers were asked, "To what positions are present accountants, accounting clerks, and record keepers promoted?" These data are summarized in Tables XI, XII, and XIII. In all instances, each company is counted separately for each position mentioned by the company's personnel manager.

Accountants. In the 14 companies, the personnel managers reported that accountants may be promoted to the following positions: Section head--mentioned by 3 personnel managers; chief accountant, chief clerk,

TABLE IX

OFFICE POSITIONS FROM WHICH COMPANY EMPLOYEES  
ARE PROMOTED TO POSITION OF ACCOUNTING CLERK AS REPORTED  
BY PERSONNEL MANAGERS OF 12 COMPANIES

Office Positions	Number of Companies Reporting*
Junior Clerk	5
Record Keeper	5
Clerk (Apprentice)	1
Clerk (Intermediate)	1
Junior Accountant	1
Training Program	1

\* Each company is counted separately for each office position mentioned by the company's personnel manager.

This table should be read as follows: The personnel managers of five companies reported that accounting clerks in their companies are promoted from junior clerks.

TABLE X

OFFICE POSITIONS FROM WHICH COMPANY EMPLOYEES  
ARE PROMOTED TO POSITION OF RECORD KEEPER AS REPORTED BY  
PERSONNEL MANAGERS OF 7 COMPANIES

Office Positions	Number of Companies Reporting*
Mail Clerk	3
Junior Clerk	2
Apprentice Clerk	1
Machine Operator	1
Messenger	1
Office Boy	1
Typist-Clerk	1

\* Each company is counted separately for each office position mentioned by the company's personnel manager.

This table should be read as follows: The personnel managers of three companies reported that record keepers in their companies are promoted from mail clerks.

TABLE XI  
POSITIONS TO WHICH ACCOUNTANTS MAY BE PROMOTED

Positions	Number of Companies Reporting*
Section Head	3
Chief Accountant	2
Chief Clerk	2
Senior Accountant	2
Staff Accountant	2
Staff Positions	2
Unit Supervisor	2
Auditing Staff	1
Cashier	1
District Supervisor - Customer	1
Division Head	1
General Accountant	1
Group Leader	1
Procedures Specialist	1

\* Each company is counted separately for each position mentioned by the company's personnel manager.

This table should be read as follows: The personnel managers of three oil companies reported that accountants in their companies may be promoted to section heads.



TABLE XII

## OFFICE POSITIONS TO WHICH ACCOUNTING CLERKS MAY BE PROMOTED

Positions	Number of Companies Reporting*
Accountant	8
Senior Clerk	2
Assistant Unit Head	1
Accountant (Tax)	1
Budget Staff	1
Chief Clerk	1
Clerk Head	1
District Control Clerk	1
District Utility Clerk	1
Intermediate Accountant	1
Senior Accountant	1
Staff Position	1

\* Each company is counted separately for each position mentioned by the company's personnel manager.

This table should be read as follows: Personnel managers of eight oil companies reported that accounting clerks in their companies may be promoted to accountants.

TABLE XIII

## OFFICE POSITIONS TO WHICH RECORD KEEPERS MAY BE PROMOTED

Positions	Number of Companies Reporting*
Accounting Clerk	8
Intermediate Clerk	3
Clerk	2
Junior Accountant	1
Junior Clerk	1
Senior Clerk	1

\* Each company is counted separately for each position mentioned by the company's personnel manager.

This table should be read as follows: Personnel managers of eight oil companies reported that record keepers in their companies may be promoted to accounting clerks.

senior accountant, staff accountant, staff position, unit supervisor--each mentioned by 2 personnel managers; and auditing staff, cashier, district supervisor (customer), division head, general accountant, group leader, and procedures specialist--each mentioned by 1 personnel manager.

Accounting Clerks. The personnel managers representing the 14 oil companies reported that accounting clerks may be promoted to the following positions: Accountant--mentioned by 8 personnel managers; senior clerk--mentioned by 2 personnel managers; and assistant unit head, accountant (tax), budget staff, chief clerk, clerk head, district control clerk, district utility clerk, intermediate accountant, senior accountant, and staff position--each mentioned by 1 personnel manager.

Record Keepers. Personnel managers of 3 of the companies reported that record keepers in their companies may be promoted to accounting clerks; 3, that they may be promoted to intermediate clerks; 2, that they may be promoted to clerks; 1, that they may be promoted to junior accountants; 1, that they may be promoted to junior clerks; and 1, that they may be promoted to senior clerks.

Summary. The personnel managers reported a variety of job titles for office positions from which accountants, accounting clerks, and record keepers are promoted and for positions to which accountants, accounting clerks, and record keepers may be promoted. The variety of job titles shows the different policies followed in different companies for the same position. Certain of these job titles are misleading because the duties performed by an employee with a certain title in 1 company may not be the same as, or even on the same level as, the duties performed by an employee with the same title in a different company.

Accountants are promoted from positions at the accounting clerk

level, or--in the case of 2 companies only--by employing new accountants. Accountants are promoted to high level positions in the companies.

The position of accounting clerk is filled by promoting from the record-keeping level or--in 2 companies--by employing new accounting clerks. These data indicate that record keepers are employed from outside the company or promoted from lesser office positions.

It is apparent from this summary that a ladder of positions exists for prospective accountants, accounting clerk, and record-keeper employees of oil companies to climb. This ladder starts with the record-keeping positions; proceeds to the accounting clerk positions; moves to the positions at the accountant level; and finally, for some prospective employees, extends up to executive positions in these oil companies.

#### Media Used in Locating Prospective Employees

Table XIV presents the media used by the 14 oil companies in locating prospective accountants, accounting clerks, and record keepers. During the interviews, 6 means of obtaining prospective accountants, accounting clerks, and record keepers were listed by the interviewer. Personnel managers were asked to indicate the media they used most frequently and the second most frequently in locating new accountants, accounting clerks, and record keepers.

All of the 14 companies maintain company employment department. Eleven of the personnel managers reported that the company employment department is the first medium used in locating prospective accountants, accounting clerks, and record keepers; and the remaining 3, that private employment agencies are the first medium used in locating prospective accountants, accounting clerks, and record keepers.

Regarding the second most frequently used media, 1 personnel manager

TABLE XIV

MEDIA USED IN LOCATING PROSPECTIVE ACCOUNTANTS  
ACCOUNTING CLERKS, AND RECORD KEEPERS AS INDICATED BY  
PERSONNEL MANAGERS OF 14 COMPANIES

Media	First Medium	Second Medium
Company Employment Department	11	1
Private Employment Agencies	3	3
United States Employment Agencies		2
Newspaper Advertisements		2
College and/or High School Employment Bureaus	—	<u>6</u>
Total	14	14

This table should be read as follows: Eleven personnel managers reported that the first medium used to locate prospective accounts, accounting clerks, and record keepers in their company employment department. One personnel manager indicated that the company employment department is the second medium used by his company for locating prospective employees.



stated that prospective employees are obtained through the company employment department; 3, that they are obtained through private agencies; 2, that they are obtained through the United States employment agencies; 2, that they are obtained through newspaper advertisements; and the remaining 6, that they are obtained through college and/or high school employment bureaus.

None of the personnel managers reported that their companies use personal friends, acquaintances, or relatives as either first or second media in locating prospective accountants, accounting clerks, and record keepers.

Summary. These findings indicate that graduating students of colleges and high schools who desire employment with oil companies as accountants, accounting clerks, and record keepers should apply direct to the employment department of the oil company. The college and/or high school employment bureau may be of help in securing a position with an oil company.

#### Nature of Employment Tests

Eight personnel managers reported that employment tests are administered to applicants for positions as accounting clerks and record keepers; and the other 6 personnel managers reported that no formal employment tests are given. The 2 personnel managers representing companies that employ new accountants reported that no formal employment tests are given to applicants for the position of accountant. Table XV summarizes these data.

One company gives a test that is company prepared. This test, administered to applicants for the positions of accounting clerk and record keeper, tests the applicants' clerical aptitude.

TABLE XV

NATURE OF EMPLOYMENT TESTS ADMINISTERED TO  
APPLICANTS FOR POSITIONS AS ACCOUNTING CLERKS AND RECORD KEEPERS  
AS INDICATED BY PERSONNEL MANAGERS OF 14 OIL COMPANIES

	Number of Companies Reporting	Abilities and Traits Tested				
		Clerical Ability	Intelligence	Personality	Clerical Aptitude	Typewriting
No Employment Tests Given	6					
Company-Prepared Tests Given	1				1	
Commercially-Prepared Tests Given	7	3	6	3	2	2

This table should be read as follows: 6 of the 14 oil companies surveyed do not give employment tests to applicants for the positions of accounting clerk and record keeper. One company gives an employment test that is company prepared; the personnel manager of this company reported that the test given measures the applicants' clerical aptitudes.

Commercially-prepared tests are administered to applicants by 7 companies. Personnel managers of these 7 companies reported that commercially-prepared tests are given to test the following abilities and traits: Intelligence, mentioned by 6 personnel managers; clerical ability and personality, mentioned by 3; and clerical aptitude and typewriting, mentioned by 2.

Summary. All tests given by these companies are administered by personnel in the company employment department. Several personnel managers representing companies that do not give employment tests stated that tests will probably be used by their companies within the near future.

#### Other Methods of Determining Abilities

In order to ascertain what other methods are used to determine abilities of the applicants for the positions of accountant, accounting clerk, and record keeper, the personnel managers were asked to indicate other methods that are used by their companies.

Accountants. In the only 2 companies that employ new accountants, the personnel managers stated that college transcripts and reference letters are required of applicants for the position of accountant; and also, personal interviews are conducted with these applicants.

Accounting Clerks. Personnel managers of 8 of the 9 companies that employ new accounting clerks reported that reference letters are required of applicants for the position of accounting clerk; 5, that college transcripts are required; and 1, that college references are contacted to ascertain the abilities of persons applying for jobs as accounting clerks. Personal interviews are conducted by the 9 personnel managers with the applicants for the position of accounting clerk.

Record Keepers. The 14 personnel managers reported that personal interviews are used to determine the abilities of applicants for the position of record keeper. Twelve of the 14 companies require reference letters and 3 companies require college transcripts from the applicants for the position of record keeper.

Summary. It is believed that persons desiring employment with an oil company should have reference letters available when they apply for a position as accountant, accounting clerk, or record keeper; and those with a college degree should have a college transcript in their possession at the time of their application for a position as accountant, accounting clerk, and record keeper. Table XVI summarizes these data in detail.

#### Training Qualifications on Office Machines

Table XVII summarizes data pertaining to the degree of skill required of new accountants, accounting clerks, and record keepers in operating the adding machine and the calculating machine. Personnel managers were asked to indicate the degree of skill required in operating the adding machine and the calculating machine. The degrees of skill were described on the interview schedule as "skilled," "semi-skilled," or "no training required." "Semi-skilled," as defined in the interview schedule, describes workers who have an elementary knowledge of the operation of the machine and its fundamental applications, but whose operating skill is below that required of a specialized operator.

Accountants. The personnel managers for the only 2 companies that employ new accountants reported that new accountants are required to be semi-skilled in the operation of the adding machine and the calculating machine.

Accounting Clerks. With regard to the adding machine, 1 personnel manager representing a company that employs new accounting clerks stated that

TABLE XVI

METHODS, OTHER THAN TESTS, USED IN DETERMINING ABILITIES OF  
APPLICANTS FOR THE POSITIONS OF ACCOUNTANTS, ACCOUNTING  
CLERKS, AND RECORD KEEPERS\*

	Methods of Determining Abilities				
	Companies Reporting	College References	College Transcripts	Reference Letters*	Personal Interview*
Accountants	2		2	2	2
Accounting Clerks	9	1	5	8	9
Record Keepers	14		3	12	14

\* For data concerning use of employment tests, see Table XV.

This table should be read as follows: The two companies that employ new accountants require college transcripts and reference letters, and conduct personal interviews in order to ascertain abilities of applicants for the position of accountant.



TABLE XVII

TRAINING ON OFFICE MACHINES REQUIRED OF BEGINNING  
ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS

	No. of Companies Reporting	Adding Machines			Calculating Machines		
		S	S/S	N*	S	S/S	N*
Accountants	2		2			2	
Accounting Clerks	9	1	6	2	2	5	2
Record Keepers	14	4	8	2	4	7	3

\* Abbreviations: S-Skilled; S/S-Semi-Skilled; N-No Training

This table should be read as follows: The two companies that employ new accountants require that they be semi-skilled in the operation of adding machines and calculating machines.

new accounting clerks are required to be "skilled" in the operation of the adding machine; 6, "semi-skilled;" and 2, "no training required."

In the 9 companies that employ new accounting clerks, 2 personnel managers reported that new accounting clerks are required to be "skilled" in the use of the calculating machine; 5, that they are required to be "semi-skilled;" and the remaining 2, that they are not required to have training in the operation of the calculating machine.

Record Keepers. Four of the 14 personnel managers reported that new record keepers are required to be "skilled" in the operation of the adding machine; 8, that they are required to be "semi-skilled;" and the remaining 2, that new record keepers are not required to have training in the operation of the adding machine.

In the operation of the calculating machine, 4 companies require new record keepers be "skilled"; 7, "semi-skilled." Three companies require no calculating machine training of their beginning record keepers.

Summary. One half or more of the personnel managers indicated that their companies require new accountants, accounting clerks, and record keepers to be "semi-skilled" in the operation of the adding machine and the calculating machine. None of the companies require that their beginning accountants, accounting clerks, and record keepers have training in the operation of any other type of office machine.

#### Previous Training Experience Required

The data in Table XVIII show the length of employment experience in the same or closely related fields required to meet the minimum qualifications for positions as beginning accountants, accounting clerks, and record keepers.

Accountants. Of the 2 companies that employ new accountants, 1

TABLE XVIII

PREVIOUS ACCOUNTING EXPERIENCE REQUIRED OF BEGINNING  
ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS

	Companies Reporting	Six Months or Less	Up to and Including One Year	Up to and Including Two Years	Over Two Years
Accountants	2	1			1
Accounting Clerks	9	3		5	1
Record Keepers	14	9	2	2	1

This table should be read as follows: Of the two companies that employ new accountants, one requires over two years' previous accounting experience, and the other requires six months or less of experience.

required over 2 years of previous accounting experience; and the other requires six months or less of experience.

Accounting Clerks. Three personnel managers representing companies that employ new accounting clerks stated that their companies require new accounting clerks to have 6 months or less accounting experience; 5, that they are required to have up to and including 2 years' experience; and the remaining 1, that they are required to have over 2 years of accounting experience.

Record Keepers. In the 14 companies that employ beginning record keepers, 9 personnel managers reported that new record keepers are required to have 6 months or less accounting experience; 2, that they are required to have up to and including 1 year of experience; 2, that they are required to have up to and including 2 years of experience; and the other 1, that they are required to have over 2 years of accounting experience.

Summary. These data indicate that six months or less experience is all that is required of beginning accountants and record keepers as reported by one-half or more of the personnel managers. More than one-half of the personnel managers reported that beginning accounting clerks are required to have from 6 months up to and including 2 years of accounting experience. Several personnel managers stated that education would make up for the lack of experience for beginning employees that seek employment with their oil companies.

#### Length of Training Period Specified

Data on the time the average employee needs to spend in training on the job with the oil companies to reach acceptable proficiency are summarized in Table XIX.

Accountants. Personnel managers for 2 companies that employ new

TABLE XIX

LENGTH OF TIME NEEDED BY BEGINNING ACCOUNTANTS, ACCOUNTING CLERKS,  
AND RECORD KEEPERS TO REACH ACCEPTABLE PROFICIENCY

	Companies Reporting	Three Months or Less	Up to and Including Six Months	Up to and Including One Year	Over One Year	No Specific Time Required
Accountants	2	2				
Accounting Clerks	9	3	3	3		
Record Keepers	14	6	3	3	1	1

This table should be read as follows: The two companies that employ new accountants, require three months or less in training on the job.



accountants reported that these employees need to spend 3 months or less in training on the job to reach acceptable proficiency.

Accounting Clerks. Of the 9 personnel managers representing companies that employ new accounting clerks, 3 reported that new accounting clerks need 3 months or less on the job before they gain acceptable proficiency; 3, up to and including 6 months; and 3, up to and including 1 year.

Record Keepers. Six personnel managers stated that new record keepers need to spend 3 months or less in training on the job to reach acceptable proficiency; 3, that they need to spend up to and including 6 months; 3, that they need to spend up to and including 1 year; and 1, that new record keepers need to spend over 1 year in training on the job to reach acceptable proficiency. The other personnel manager reported that no specific time is needed by beginning employees to reach acceptable proficiency.

Summary. Several personnel managers stated that the period which new record keepers need to reach acceptable proficiency is considered a probationary period for these employees. High school and college graduates who gain employment with an oil company in the position of accountant, accounting clerk, or record keeper should expect to spend some time in training on the job before they are considered proficient workers.

Duties Performed by Accountants, Accounting Clerks, and Record Keepers

Personnel managers were asked to indicate what duties--other than those given in the definitions of an accountant, accounting clerk, and record keeper on the interview schedule--were performed by accountants, accounting clerks, and record keepers in their companies.

Accountants. Eleven personnel managers reported that the definition given for an accountant included all duties performed by beginning accountants in their companies. Personnel managers of the 3 remaining companies

indicated that accountants in their companies performed the following duties, not included in the definition, which are listed in the order of their frequency of mention:

- Supervision
- Budget work
- Prepare special reports (as required)
- Develop improved methods (within his unit)
- Revise financial reports

Accountants. Eleven personnel managers reported that the definition given for an accountant included all duties performed by beginning accountants in their companies. Personnel managers of the 3 remaining companies indicated that accountants in their companies performed the following duties, not included in the definition, which are listed in the order of their frequency of mention:

- Supervision
- Budget work
- Prepare special reports (as required)
- Develop improved methods (within his unit)
- Revise financial reports

Accounting Clerks. Twelve personnel managers reported that the definition given on the interview schedule covered all the duties performed by accounting clerks in their companies. Personnel managers of the 2 remaining companies indicated that accounting clerks in their companies also performed the following duties, listed in the order of their frequency of mention:

- Statistical work
- Distribution of expense
- Supervision
- Prepare routine cost or financial reports

Record Keepers. Twelve personnel managers indicated that the definition for a record keeper given on the interview schedule adequately covered all the duties performed by record keepers in their companies. Personnel managers of the other 2 companies reported that record keepers

in their companies performed these additional duties, listed in the order of their frequency of mention:

Assign voucher numbers  
Compare data  
Some bookkeeping machine operation

#### Assistance Offered to Office Employees

To determine whether oil companies will assist employees who wish to continue with their education, personnel managers were asked, "Does your company offer assistance to employees who wish to get more education?" The data received in answer to this question are summarized in Table XX.

Two of the 14 personnel managers stated that tuition is paid after successful completion of approved courses; 2 reported that two-thirds of the tuition is paid after successful completion of approved courses; and the remaining 10 stated that no assistance is offered to their office employees who wish to get more education.

Summary. Of the companies that do not offer assistance, several personnel managers indicated that in the near future some plan would be worked out whereby their office employees could attend night school--with the tuition being paid by the company. One personnel manager reported that his company employs 1 or 2 office employees yearly in a lesser-office position with the agreement that the employee will attend night school to gain additional training in accounting; and that several employees have worked up to excellent positions through this program.

#### Special Training

Opinions of 5 of the 14 personnel managers were that special training, peculiar only to the oil industry, should be given in college accounting courses for those students who plan to work for an oil company after leaving school. Table XXI presents this information.

TABLE IX  
ASSISTANCE OFFERED TO OFFICE EMPLOYEES WHO  
WISH TO GET MORE EDUCATION

Kind of Assistance Offered	Number of Companies Who Offer Assistance To Employees
Tuition is paid after successful completion of approved courses	2
Two-thirds of the tuition is paid after successful completion of approved courses	2
None	10

This table should be read as follows: Two companies pay tuition after employees successfully complete approved courses.

"Pipe-line accounting" and "oil and gas accounting" were each mentioned by 2 personnel managers as special training which prospective oil company employees should receive in college accounting courses; "accounting for operation for joint-interest properties," "oil and gas laws," and "refining, marketing, and exploration" were each mentioned by 1 personnel manager as special training which should be included in college accounting courses for students who plan to work for an oil company after graduation.

Summary. Several of the personnel managers stated that they believe college students who plan to work for oil companies should have a petroleum accounting course included in their college training program. Of the 10 personnel managers who stated that no special training peculiar to the oil industry should be given in college accounting courses, several commented that their beginning accountants, accounting clerks, and record keepers were in need of: More experience in the routine accounting procedures; understanding the relationship between the different steps in accounting; and a better understanding of the overall picture of what takes place in accounting. Data pertaining to special training is shown in Table XXI.

#### Summary

In making an analysis of the job requirements presented in the preceding pages, the mode was selected as the measure of central tendency best suited to represent the typical job requirements—for beginning accountants, accounting clerks, and record keepers—and as the average which will give the best results as to the needs for the future use of this study.

Accountants. The job requirements for a beginning accountant are:

- (1) Must be 25 years old;
- (2) May be either single or married;
- (3) Must be a college graduate;
- (4) Must have an elementary knowledge of the operation and the fundamental applications of the adding machine and the calculating machine;
- (5) Must be trained in petroleum accounting;
- (6) must have

TABLE XXI.

SPECIAL TRAINING WHICH PERSONNEL MANAGERS OF 5  
COMPANIES BELIEVE SHOULD BE GIVEN IN COLLEGE  
ACCOUNTING COURSES

Special Training Required	Number of Personnel Managers Who Mentioned Training Should be Given
Pipe-line accounting	2
Oil and gas accounting	2
Accounting for operation of joint- interest properties	1
Oil and gas laws	1
Refining, marketing, and exploration	1

This table should be read as follows: One personnel manager reported that students in college accounting courses, who plan to work for oil companies after leaving school, should be taught accounting for operation of joint-interest properties.

6 months or less previous accounting experience; and (7) may be expected to work 3 months or less on the job before he is considered proficient.

Special helps in gaining employment with an oil company are: (1) Only a few oil companies employ beginning accountants; (2) Should apply directly to the company employment department; and (3) Should have his college transcript and reference letters in his possession.

Accounting Clerks. The job requirements for a beginning accounting clerk are: (1) Must be 20 years old; (2) May be married or single; (3) May be either a business college or a junior college graduate; (4) Must have an elementary knowledge of the operation and the fundamental applications of the adding machine and the calculating machine; (5) Must have up to and including 2 years previous accounting experience; and (6) May be expected to work up to and including 1 year on the job before he is considered proficient.

Special helps in gaining employment with an oil company are: (1) About two-thirds of the oil companies employ new accounting clerks; (2) Should apply directly to the company employment department; (3) Should expect to take employment tests; and (4) Should have his college transcript and reference letters in his possession.

Record Keepers. The job requirements for a beginning record keeper are: (1) Must be 18 years old; (2) May be either married or single; (3) Must be a high school graduate; (4) Must have an elementary knowledge of the operation and the fundamental applications of the adding machine and the calculating machine; (5) Must have 6 months or less previous accounting experience; and (6) May be required to work up to and including 1 year on the job before he is considered proficient.

Special helps in gaining employment with oil companies are: (1) All



oil companies employ new record keepers; (2) Should expect to take employment tests; (3) Should have reference letters in his possession; and (4) Should apply directly to the company employment department.

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## CHAPTER IV

EVALUATION OF THE TRAINING OF BEGINNING ACCOUNTANTS,  
ACCOUNTING CLERKS, AND RECORD KEEPERS

In order to determine whether the training provided in high schools and colleges has been adequate to prepare students for employment with oil companies as accountants, accounting clerks, and record keepers, personnel managers of the oil companies were asked to indicate how often they find these beginning office employees deficient in the following fields of instruction and training: office machines, subject matter, office duties, and personal traits.

In answering this section of the interview schedule, personnel managers were asked to consider those duties that beginning accountants, accounting clerks, and record keepers are expected to be able to perform.

The frequency with which personnel managers find new accountants, accounting clerks, and record keepers deficient in office machine operation, subject matter, office duties, and personal traits has nothing to do with the number of times an individual employee may be found deficient; it is concerned wholly with how often the personnel manager finds, in each group as a whole, workers who are deficient in these specific abilities and traits.

Personnel Managers' Opinions Concerning Office Machine Training of New Accountants, Accounting Clerks, and Record Keepers

Accountants. In the only 2 companies that employ new accountants, 1 personnel manager reported that accountants are occasionally deficient

in the use of adding machines and calculating machines; and the other reported that accountants are never deficient in the operation of, or do not use, adding machines and calculating machines.

Accounting Clerks. In the 9 companies that employ new accounting clerks, 1 personnel manager reported that new accounting clerks are frequently deficient in the use of adding machines; 3, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 4, that new accounting clerks are never deficient in the use of, or do not use, adding machines.

With regard to use of calculating machines, personnel managers for 3 of the 9 companies that employ new accounting clerks reported that new accounting clerks are frequently deficient in the use of this machine; 2, that they are occasionally deficient; and 4, that they are never deficient in the use of, or do not use, calculating machines.

Record Keepers. Two personnel managers reported that new record keepers are frequently deficient in the use of adding machines; 3, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 8, that they are never deficient in the use of, or do not use, adding machines.

Four personnel managers reported that they frequently find, and 2 personnel managers that they occasionally find, that new record keepers are deficient in the use of calculating machines. The 8 remaining personnel managers reported that new record keepers are never deficient in the use of, or do not use, calculating machines.

Summary. From the findings concerning deficiencies in the use of office machines, it is apparent that personnel managers find new employees deficient in the use of the calculating machine more often than in the use of the adding machine.

For each of the 3 groups--accountants, accounting clerks, and record keepers--one half or more of the personnel managers reported that new employees are never deficient in the operation of, or do not use, adding machines and calculating machines. It is significant, however, that some personnel managers do report deficiencies in new employees in each group; and it is believed that the findings indicate that instruction and training in the operation of adding machines and calculating machines should be given to students who wish to enter employment as accountants, accounting clerks, or record keepers in the offices of oil companies.

Data concerning the frequency with which new employees are found deficient in the operation of office machines are presented in detail in Table XXII.

Subject Matter Training of New Accountants, Accounting Clerks, and Record Keepers

Table XXIII summarizes the opinions of personnel managers with reference to various subject matter deficiencies of beginning accountants, accounting clerks, and record keepers.

Accountants. The personnel manager of 1 of the only 2 companies that employ new accountants reported that new accountants are frequently deficient in grammar and punctuation; and the other reported that new accountants are occasionally deficient in these knowledges.

The 2 personnel managers reported that new accountants are frequently deficient in spelling, occasionally deficient in arithmetic, and rarely deficient in penmanship.

In the subject matter area of speech, the 2 personnel managers reported that beginning accountants are frequently deficient in "manner of delivery," and occasionally deficient in "tone of voice" and "enunciation."

TABLE XXII

OFFICE MACHINES TRAINING IN WHICH 14 PERSONNEL MANAGERS  
INDICATE THAT NEW ACCOUNTANTS, ACCOUNTING CLERKS,  
AND RECORD KEEPERS ARE DEFICIENT

Office Machines	Accountants (2 Companies)				Accounting Clerks (9 Companies)				Record Keepers (14 Companies)			
	Frequently	Occasionally	Rarely	Never (Or do not use)	Frequently	Occasionally	Rarely	Never (Or do not use)	Frequently	Occasionally	Rarely	Never (Or do not use)
Adding Machines		1		1	1	3	1	4	2	3	1	8
Calculating Machines		1		1	3	2		4	4	2		6

This table should be read as follows: In the two companies that employ new accountants, one of the personnel managers reported that new accountants are occasionally deficient in the use of the adding machine; and the other reported that new accountants are never deficient in the operation of the adding machine or do not use the adding machine.

TABLE XXIII

SUBJECT MATTER IN WHICH 14 PERSONNEL MANAGERS  
INDICATE THAT NEW ACCOUNTANTS, ACCOUNTING  
CLERKS, AND RECORD KEEPERS ARE DEFICIENT

Subject Matter	Accountants (2 Companies)				Accounting Clerks (9 Companies)				Record Keepers (14 Companies)			
	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never
Grammar	1	1			2	5		2	2	5		7
Punctuation	1	1			2	5		2	5	3		6
Spelling	2				4	4		1	4	4	1	5
Arithmetic		2			1	4	1	3		4	3	7
Penmanship			2		4	2	1	2	3	4	1	6
Speech:												
Manner of Delivery	2				3	2	2	2	3	2		9
Tone of Voice		2			1	3		5		4		10
Enunciation		2			1	3		5		4		10
Accounting Skills		1		1	1	2	1	5	2	2	3	7
Filing				2	2			7	3			11

This table should be read as follows: In the two companies that employ new accountants, one of the personnel managers reported that new accountants are frequently deficient in grammar; and the other reported that new accountants are occasionally deficient in grammar.

One personnel manager reported that new accountants are occasionally deficient in accounting skills, while the other reported that new accountants are never deficient in accounting skills.

Both personnel managers reported that new accountants are never deficient in filing.

Accounting Clerks. In the 9 companies that employ new accounting clerks, 2 personnel managers stated that new accounting clerks are frequently deficient; 5, that they are occasionally deficient; and 2, that they are never deficient in grammar and punctuation. Four personnel managers reported that beginning accounting clerks are frequently deficient in spelling; 4, that they are occasionally deficient; and the remaining 1, that they are never deficient.

One personnel manager stated that new accounting clerks are frequently deficient in arithmetic; 4, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 3, that they are never deficient.

Penmanship was reported by 4 personnel managers as a skill in which new accounting clerks are frequently deficient. Two personnel managers reported that new accounting clerks are occasionally deficient in penmanship; 1, that they are rarely deficient; and the remaining 2, that they are never deficient.

Three personnel managers reported that new accounting clerks are frequently deficient in "manner of delivery"; 2, that they are occasionally deficient; 2, that they are rarely deficient; and the remaining 3, that they are never deficient.

One personnel manager stated that in "tone of voice" and "enunciation" new accounting clerks are frequently deficient; 3 reported that they are



occasionally deficient; and the remaining 5 reported that they are never deficient.

Record Keepers. One personnel manager reported that new record keepers are frequently deficient in the use of accounting skills; 2, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 5, that they are never deficient.

Of the 14 personnel managers representing companies that employ new record keepers, 2 reported that frequently new record keepers are deficient in grammar; 5, occasionally; and 7, never.

Five personnel managers stated that new record keepers are frequently deficient in punctuation; 3, that they are occasionally deficient; and the remaining 6, that they are never deficient.

Spelling was reported by 4 personnel managers as a subject matter area in which new record keepers are frequently deficient. Four personnel managers stated that record keepers are occasionally deficient in spelling; 1, that they are rarely deficient; and 5, that they are never deficient.

Of the 14 personnel managers representing companies that employ new record keepers, 4 reported that occasionally new record keepers are deficient in arithmetic; 3, rarely; and 7, never.

Three personnel managers stated that new record keepers are frequently deficient in penmanship; 4, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 4, that they are never deficient.

"Tone of voice" and "enunciation" (speech) were reported by 10 personnel managers as areas in which beginning record keepers are never deficient. Only 4 personnel managers reported that record keepers are occasionally deficient in these subject matter areas.

Only 2 personnel managers reported that new record keepers are frequently deficient in accounting skills; 2, that they are occasionally deficient; 3, that they are rarely deficient; and the remaining 7, that they are never deficient.

Three personnel managers stated that new record keepers are frequently deficient in filing; and 11 personnel managers reported that they are never deficient in filing.

Summary. The frequency with which personnel managers find deficiencies in the subject matter training of new employees indicates that numerous beginning accountants, accounting clerks, and record keepers are deficient in the following areas: Grammar, punctuation, spelling, penmanship, and speech. It is believed that remedial training in these areas is justified for students who wish to gain employment with oil companies.

Training of Beginning Accountants, Accounting Clerks, and Record Keepers in the Performance of Office Duties.

Accountants. Personnel managers of the only 2 companies that employ beginning accountants reported that new accountants are never deficient in using a typewriter and filing.

One of the 2 personnel managers stated that new accountants are frequently deficient in "answering the telephone" and "meeting and directing office callers;" the other reported that new accountants are never deficient in these duties.

"Composing business letters" was reported by 1 personnel manager as a duty in which beginning accountants are frequently deficient. The other personnel manager reported that beginning accountants are occasionally deficient in this duty.

Accountants were reported by 1 personnel manager to be occasionally

deficient in accounting duties; however, the other personnel manager reported that accountants are never deficient in these duties.

Accounting Clerks. In the 9 companies that employ beginning accounting clerks, 2 personnel managers reported that new accounting clerks are frequently deficient in using a typewriter; and the remaining 7, that new accounting clerks are never deficient using a typewriter.

In the 9 companies that employ new accounting clerks, 2 personnel managers stated that beginning accounting clerks are frequently deficient in "answering the telephone" and in the ability to meet and direct office callers. Two personnel managers reported that the training of new accounting clerks in the performance of these office duties is rarely deficient. Five personnel managers reported that new accounting clerks are never deficient in performing these duties.

Accounting clerks were reported by 3 personnel managers to be frequently deficient in composing business letters. Two personnel managers reported that accounting clerks are occasionally deficient in this duty; 1, that they are rarely deficient; and the remaining 3, that they are never deficient.

Personnel managers of 3 companies stated that beginning accounting clerks are occasionally deficient in accounting skills. Six personnel managers reported that new accounting clerks are never deficient in these skills.

Record Keepers. Eleven of the 14 personnel managers representing companies that employ new record keepers reported that beginning record keepers are never deficient in using a typewriter; 1, frequently; 1, occasionally, and 1, rarely.

Only 3 personnel managers stated that beginning record keepers are frequently deficient in filing; the remaining 11 personnel managers reported that new record keepers are never deficient in this office duty.

With regard to the duty, "answering the telephone," personnel managers of 2 companies that employ new record keepers reported that these employees are frequently deficient in this duty; 1, that they are occasionally deficient; 3, that they are rarely deficient; and 8, that they are never deficient.

Only 2 of the 14 personnel managers representing companies that employ new record keepers reported that beginning record keepers are frequently deficient in the ability to meet and direct office callers; 2, occasionally; 2, rarely; and 8, never.

Personnel managers of 4 of the 14 companies that employ new record keepers reported that new record keepers are frequently deficient in composing business letters; 3, that they are occasionally deficient; 1, that they are rarely deficient; and the remaining 6, that they are never deficient.

Personnel managers for 3 of the 14 companies that employ new record keepers reported that the performance of accounting duties by new record keepers is occasionally deficient; 1, that it is rarely deficient; and 10, that it is never deficient.

Summary. These data indicate that some deficiencies exist in the training for each of the 3 groups -- accountants, accounting clerks, and record keepers -- in office duties, with the greatest number of deficiencies occurring in the ability to compose business letters. Additional training in this ability should be provided in the training of prospective accountants, accounting clerks, and record keepers for employment in the offices of oil companies.

Data pertaining to the frequency with which personnel managers found the performance of office duties by accountants, accounting clerks, and

record keepers deficient are presented in detail in Table XXIV.

Personal Traits of Beginning Accountants, Accounting Clerks,  
and Record Keepers

Table XXV summarizes the opinions of personnel managers with respect to the adequacy of training in personal traits of beginning accountants, accounting clerks, and record keepers.

Accountants. In the two companies that employ beginning accountants, "attention to details," "grooming," "tact," "industry," "accuracy," "initiative," and "judgment," were reported by 1 of the personnel managers as personal traits in which beginning accountants are occasionally deficient. The other personnel manager reported that new accountants are never deficient in these personal traits.

One personnel manager reported that beginning accountants are frequently deficient in "organization of details;" and the other, that new accountants are occasionally deficient in this personal trait.

The 2 personnel managers indicated that new accountants are occasionally deficient in the "ability to follow details," but never deficient in "loyalty."

In the "ability to get along with other people," 1 personnel manager reported that new accountants are occasionally deficient; and the other reported that beginning accountants are rarely deficient.

"Honesty," "dependability," "ambition," "alertness," and "courtesy," were each reported by 1 personnel manager as traits in which beginning accountants are occasionally deficient; and by the other, as traits in which new accountants are rarely deficient.

Accounting Clerks. In the 9 companies that employ new accounting clerks, 4 personnel managers stated that beginning accounting clerks are

TABLE XXIV

TRAINING IN THE PERFORMANCE OF OFFICE DUTIES IN WHICH  
14 PERSONNEL MANAGERS INDICATE THAT NEW ACCOUNTANTS,  
ACCOUNTING CLERKS, AND RECORD KEEPERS ARE DEFICIENT

Subject Matter	Accountants (2 Companies)				Accounting Clerks (9 Companies)				Record Keepers (14 Companies)			
	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never
Using a typewriter				2	2			7	1	1	1	11
Filing				2	2			7	3			11
Answering the telephone	1		1		2		2	5	2	1	3	8
Meeting and directing office callers	1		1		2		2	5	2	2	2	8
Composing business letters	1	1			3	2	1	3	4	3	1	6
Accounting duties		1		1		3		6		3	1	10

This table should be read as follows: The two companies that employ new accountants report that new accountants are never regarded as deficient in using the typewriter.

TABLE XXV

TRAINING IN PERSONAL TRAITS IN WHICH 14 PERSONNEL MANAGERS INDICATE  
THAT NEW ACCOUNTANTS, ACCOUNTING CLERKS, AND RECORD KEEPERS ARE DEFICIENT

Subject Matter	Accountants (2 Companies)				Accounting Clerks (9 Companies)				Record Keepers (14 Companies)			
	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never	Frequently	Occasionally	Rarely	Never
Attention to details		1		1		4	1	4		6	2	6
Organization of duties	1	1			4	3		2	4	3	1	6
Ability to follow instructions		2			1	4		4	1	5	1	7
Ability to get along with other people		1	1			2	4	3		3	7	4
Grooming		1		1		3	1	5		4	2	8
Tact		1		1		3	1	5		4	2	8
Honesty			1	1			3	6			6	8
Dependability			1	1		1	3	5		3	3	8
Ambition			1	1		2	2	5	1	2	3	8
Alertness			1	1		1	3	5		4	2	8
Industry		1		1		3	1	5		7		7
Accuracy		1		1	1	3	1	4	1	3	3	7
Loyalty				2			3	6		1	4	9
Courtesy			1	1		1	3	5		2	4	8
Initiative		1		1	1	3	1	4	2	5		7
Judgment		1		1	1	4		4	1	6		7

This table should be read as follows: In the two companies that employ new accountants, one of the personnel managers reported that new accountants are occasionally regarded as deficient in attention to details; and the other reported that new accountants are never regarded as deficient in attention to details.



occasionally deficient in "attention to details;" 1, that they are rarely deficient; and the remaining 4, that they are never deficient.

"Organization of details," is the trait in which most new accounting clerks are frequently deficient. Four personnel managers reported that new accounting clerks are frequently deficient in this trait; 3, that they are occasionally deficient; and only 2, that they are never deficient.

In the 9 companies that employ new accounting clerks, 2 personnel managers stated that new accounting clerks are occasionally deficient in the "ability to get along with other people;" 4, that they are rarely deficient in this trait; and the remaining 3, that they are never deficient in this trait.

"Ability to follow instructions" and "judgment" were reported by 1 personnel manager as the traits in which beginning accounting clerks are frequently deficient. Four personnel managers reported that new accounting clerks are occasionally deficient in these traits; and the remaining 4, that new accounting clerks are never deficient in these traits.

Three personnel managers reported that beginning accounting clerks are occasionally deficient in "grooming," "tact," and "industry." Only 1 personnel manager finds that accounting clerks are rarely deficient in these traits; the remaining 5 find that new accounting clerks are never deficient in these personal traits.

"Honesty" and "loyalty" were reported by 3 personnel managers as traits in which new accounting clerks are rarely deficient; however, 6 personnel managers reported that new accounting clerks are never deficient in these traits.

"Dependability," "alertness," and "courtesy" were reported by 1 personnel manager as traits in which beginning accounting clerks are occasionally deficient. Three personnel managers stated that new accounting

clerks are rarely deficient, and the remaining 5, that new accounting clerks are never deficient, in these personal traits.

In the 9 companies that employ new accounting clerks, 2 personnel managers stated that beginning accounting clerks are occasionally deficient in "ambition;" 2, that they are rarely deficient; and the remaining 5, that they are never deficient in this personal trait.

Of the 9 personnel managers representing companies that employ new accounting clerks, 1 reported that beginning accounting clerks are frequently deficient in "accuracy" and "initiative;" 3, occasionally; 1, rarely; and 4, never.

Record Keepers. Record Keepers were reported by 6 of the 14 personnel managers representing companies that employ new record keepers to be occasionally deficient in "attention to details;" by 2, rarely; and by 6, never.

"Organization of duties" was reported by 4 personnel managers as a trait in which new record keepers are frequently deficient. Three personnel managers stated that new record keepers are occasionally deficient; 1, that they are rarely deficient; and the remaining 6, that they are never deficient in this personal trait.

Of the 14 personnel managers representing companies that employ new record keepers, 1 personnel manager reported that new record keepers are frequently deficient in the "ability to follow instructions;" 5 occasionally; 1, rarely; and 7, never.

Three personnel managers reported that new record keepers are occasionally deficient in the "ability to get along with other people." Seven personnel managers reported that they rarely find, and 4 personnel managers that they never find, that new record keepers are deficient in this personal trait.

"Grooming," "tact," and "alertness" were reported by 4 personnel managers as traits in which beginning record keepers are occasionally deficient. Two personnel managers reported that new record keepers are rarely deficient in these personal traits; and the remaining 8, that beginning record keepers are never deficient in these personal traits.

Six personnel managers reported that beginning record keepers are rarely deficient in "honesty;" and the other 8, that new record keepers are never deficient in this trait.

Record keepers were reported by 3 of the 14 personnel managers representing companies that employ new record keepers to be occasionally deficient in "dependability." Three personnel managers stated that beginning record keepers are rarely deficient in this trait; and the other 8, that beginning record keepers are never deficient in this trait.

One personnel manager reported that he frequently finds; 2 personnel managers, that they occasionally find; and 3 personnel managers, that they rarely find, that new record keepers are deficient in "ambition." The eight remaining personnel managers reported that new record keepers are never deficient in "ambition."

"Industry" was reported by 7 personnel managers as a trait in which new record keepers are occasionally deficient. The other 7 personnel managers reported that new record keepers are never deficient in "industry."

One personnel manager reported that beginning record keepers are frequently deficient in "accuracy;" 3, that they are occasionally deficient; 3, that they are rarely deficient; and the remaining 7, that they are never deficient.

One personnel manager reported that beginning record keepers are frequently deficient in "loyalty." Four personnel managers stated that new record keepers are rarely deficient in this trait; and 9 stated that new

record keepers are never deficient in this trait.

Of the 14 personnel managers representing companies that employ new record keepers, 2 reported that new record keepers are occasionally deficient in "courtesy;" 4, rarely; and 8, never.

Two personnel managers reported that new record keepers are frequently deficient in "initiative;" 5, that they are occasionally deficient; and the remaining 7, that they are never deficient.

In the 14 companies that employ new record keepers, 1 reported that new record keepers are frequently deficient in "judgment;" 6, that they are occasionally deficient; and the other 7, that they are never deficient.

Summary. These data indicate that the frequency with which the personnel managers find these new employees deficient in certain personal traits is too high.

For the accountants, there is only 1 trait in which both personnel managers reported that new employees are never deficient; however, there are 13 traits in which 1 of the 2 personnel managers reported that new employees are never deficient.

For the accounting clerks, there are no traits in which the personnel managers, as a group, reported that new employees are never deficient, but there are 9 traits in which 5 or more of the personnel managers reported that new employees are never deficient.

For the record keepers, there are no traits in which all of the personnel managers reported that new employees are never deficient, but there are 8 traits in which 50 per cent or more of the personnel managers reported that new employees are never deficient.

In conclusion, it is believed that more emphasis should be placed on the development of personal traits in training prospective accountants,

accounting clerks, and record keepers. Personal traits in which special additional training should be given are, in the order of their importance as indicated by frequencies with which personnel managers find deficiencies in new employees: Organization of duties, initiative, judgment, and the ability to follow instructions.

## CHAPTER V

### SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATION

The purpose of this study, as stated in Chapter I, is to gather data pertaining to the minimum employment requirements for new accounting and bookkeeping employees in selected oil companies of Oklahoma, and to interpret these data in such a manner that they may be helpful to students, to instructors in college accounting, and to teachers of bookkeeping in high schools situated near oil company headquarters.

Data were collected through personal interviews with personnel managers of 14 oil companies located in 3 Oklahoma cities. All of the interviews were held during the first half of the month of June, 1950. Data obtained through the interviews were presented in Chapters III and IV.

#### Summary of Findings

The findings are summarized as answers to the specific questions that were listed in the statement of the problem in Chapter I.

1. Does the instruction and training given by State colleges and high schools located near oil company headquarters adequately prepare students to enter employment with oil companies as accountants, accounting clerks, or record keepers? If not, in what areas is the training deficient?

One half or more of the personnel managers reported that new accountants, accounting clerks, and record keepers are never deficient in the operation of, or do not use, adding machines and calculating machines; however, a significant number of personnel managers do report deficiencies in new employees in each group.

Numerous beginning accountants, accounting clerks, and record keepers are deficient in the following subject matter areas: Grammar, punctuation, spelling, penmanship, and speech. These data reveal that remedial training is needed in these five areas.

Additional training in composing business letters is needed by prospective accountants, accounting clerks, and record keepers. Very few personnel managers find new accountants, accounting clerks, and record keepers deficient in the performance of accounting duties.

There is only 1 trait in which the personnel managers never find accountants deficient; and there are no traits in which the personnel managers never find accounting clerks and record keepers deficient. These data indicate that more emphasis should be placed on the development of personal traits. Personal traits in which special training should be given are, in the order of their importance as indicated by frequencies with which personnel managers find deficiencies: Organization of duties, initiative, judgment, and ability to follow instructions.

2. What special training, if any, that is peculiar only to the oil industry should be given to prospective accounting and bookkeeping employees by colleges and by high schools located in the vicinities of oil companies?

Only 5 of the 14 personnel managers were of the opinion that special training, peculiar only to the oil industry, should be given in college accounting courses to prospective oil company accountants, accounting clerks, and record keepers.

"Pipe-line accounting" and "oil and gas accounting" were each suggested by 2 personnel managers as special training which should be taught to prospective accountants, accounting clerks, and record keepers in college accounting courses.



"Oil and gas laws," "accounting for operation of joint-interest properties," and "refining, marketing, and exploration" were each suggested by 1 personnel manager.

Several of the personnel managers stated that they believe college students who plan to work for oil companies should have a petroleum accounting course included in their college training. Several of the 10 personnel managers who stated that no special training peculiar to the oil industry need be included in college accounting courses commented that their beginning accountants, accounting clerks, and record keepers were in need of: More experience in the routine accounting procedures; understanding the relationship between the different steps in accounting; and a better understanding of the overall picture of what takes place in accounting.

3. How many people are employed as accountants, accounting clerks, and record keepers by the selected oil companies?

The 14 oil companies included in this study employ a total of 1,708 accountants, accounting clerks, and record keepers. Of this total, 330 are accountants, 775 are accounting clerks, and 603 are record keepers.

4. During a normal business year, how many new accountants, accounting clerks, and record keepers do the selected oil companies employ? Will this number change for any reason during the next 5 years?

In the total number of positions that now exist in the oil companies, personnel managers estimated that at least 246 vacancies occur during a normal business year. Of this total, 11 are for accountants, 92 are for accounting clerks, and 143 are for record keepers.

No change in the number of new accountants to be employed by their companies during the next 5 years was indicated by the 2 personnel managers

whose companies employ new accountants.

One personnel manager indicated that the number of accounting clerks to be newly employed by his company would be above normal during the next 5 years; and 1 personnel manager indicated that the number of new record keepers which his company employs is expected to be above normal during the next 5 years. Increases were indicated as a result of a planned expansion program by these companies, which is expected to make necessary the employment of a number of new accounting clerks and record keepers.

One personnel manager indicated that the number of accounting clerks which his company employs each year is expected to be below normal within the next 5 years; 2 personnel managers indicated that the number of record keepers to be newly employed by their companies is expected to be below normal within the next 5 years. Decreases in the normal number of new accounting clerks and record keepers employed by these companies during the next 5 years are expected because these companies are stabilizing their operations; therefore, vacancies in the positions of accounting clerk and record keeper are not filled by employing replacements, but the duties are distributed among the remaining accounting department personnel.

5. What are the minimum educational qualifications required of new accountants, accounting clerks, and record keepers?

The only 2 companies that employ new accountants require college graduation for both men and women.

Of the 9 companies that employ new accounting clerks, 4 require that new accounting clerks be at least business college or junior college graduates; 3, that they be college graduates; 1, that they be at least junior college graduates; and the remaining 1, that they be at least high school graduates.

Eleven of the 14 companies surveyed require at least high school graduation of their beginning record keepers. Three companies require beginning record keepers to be college graduates.

Under the present labor-market conditions, several personnel managers indicated that their companies are able to fill vacancies in all 3 classifications with college graduates.

One-half or more of the personnel managers indicated that their companies require that, in addition to meeting the minimum education requirements specified, new accountants, accounting clerks, and record keepers be "semi-skilled" in the operation of the adding machine and the calculating machine.

6. What minimum age requirement and experience qualifications, if any, are required of new accountants, accounting clerks, and record keepers?

One company has a minimum age requirement of 25 years for either men or women to fill the position of accountant. The other company will employ any person who has the necessary abilities, regardless of age.

For beginning men accounting clerks, the average minimum age requirement is 21.14 years; for women, the average age requirement is 21.25 years. Two companies do not have a minimum age requirement for beginning accounting clerks.

For beginning men record keepers, the average of the minimum ages for employment specified by the personnel managers is 19.06; for women, 18.83 years. Four companies do not have a minimum age requirement for beginning record keepers.

One-half or more of the personnel managers reported that 6 months or less previous experience in the same or closely related fields is required of beginning accountants and record keepers. A majority of the personnel

managers reported that beginning accounting clerks are required to have from 6 months up to and including 2 years of previous experience in the same or closely related fields. Several personnel managers reported that education would make up for the lack of experience of these beginning employees.

Beginning accountants need to spend 3 months or less in training on the job to reach acceptable proficiency. Beginning accounting clerks and record keepers need to spend from less than 3 months up to and including 1 year in training on the job to reach acceptable proficiency. One personnel manager reported that no specific time is needed by beginning employees with his company to reach acceptable proficiency.

7. What duties are performed by new accountants, accounting clerks, and record keepers?

Eleven personnel managers reported that the definition given for an accountant in the interview schedule included all duties performed by beginning accountants in their companies. Personnel managers of the remaining 3 companies indicated that, in addition to the duties given in the definition of an accountant, new accountants in their companies frequently perform all or some of these duties:

- Supervision
- Prepare special reports (as required)
- Budget work
- Develop improved methods (within unit)
- Revise financial reports

Twelve personnel managers reported that the definition given on the interview schedule covered all the duties performed by accounting clerks in their companies. Personnel managers of the remaining 2 companies indicated that, in addition to the duties given in the definition of an accounting clerk, new accounting clerks frequently perform all or some of these duties:

Statistical work  
 Distribution of expense  
 Supervision  
 Prepare routine cost or financial reports

Twelve personnel managers indicated that the definition for a record keeper given on the interview schedule adequately covered all the duties performed by record keepers in their companies. Personnel managers of the other 2 companies reported that record keepers performed these additional duties:

Assign voucher numbers  
 Compare data  
 Some bookkeeping machine operation

8. Are accountant, accounting clerk, and record-keeper vacancies filled by new employees or are they filled by promoting or shifting present employees?

Each of the 14 companies fills vacancies for accountants by promoting or shifting their present employees; and only 2 companies, as a second choice, employ new accountants if none of their present employees are qualified for the vacancy.

Two of the 14 companies employ new accounting clerks. Of the other 12 companies, 7 employ new accounting clerks in filling accounting clerk vacancies that cannot be filled through the preferred method of promoting or shifting present employees; the other 5 reported that they do not resort to hiring new accounting clerks.

One-half of the companies fill all record-keeping vacancies by employing new record keepers; and the other half use both methods--promoting or shifting present employees and obtaining new employees--in filling these vacancies.

Office positions from which promotions to accountant are made are:  
 Accounting clerk, clerk, clerks (Intermediate), senior clerks, intermediate

clerks, and distribution clerks.

Office positions from which promotions to accounting clerk are made are: Junior clerk, record keeper, clerk (apprentice), clerk (Intermediate), junior accountant, and a training program.

Office positions from which promotions to record keeper are made are: Mail clerk, junior clerk, apprentice clerk, machine operator, messenger, office boy, and typist-clerk.

Accountants may be promoted most frequently to the following positions: Section head, chief accountant, chief clerk, senior accountant, staff position, and unit supervisor.

Accounting clerks may be promoted most frequently to the positions of accountant and senior clerk.

Record keepers may be promoted most frequently to the following positions: Accounting clerk, intermediate clerk, and clerk.

9. What methods are followed in employing new accountants, accounting clerks, and record keepers?

All of the 14 companies maintain employment departments. This company employment department is the first medium used by 11 of the companies; 1 company uses it as a second medium for locating prospective employees.

Private employment agencies are used by 6 of these companies in locating prospective accountants, accounting clerks, and record keepers. These agencies are used by 3 companies as the first medium; and by 3 companies as the second medium.

College and/or high school employment bureaus, United States employment agencies, and newspaper advertisements are other second media used by these companies in locating prospective accountants, accounting clerks, and record keepers.

Eight personnel managers reported that employment tests are administered to applicants for the positions of accounting clerk and record keeper. Six companies give no formal employment tests to applicants.

One company gives a company-prepared test which tests the applicants' clerical aptitude.

The remaining 7 companies administer commercially-prepared tests which test the following abilities and traits: Intelligence, clerical ability, personality, clerical aptitude, and typewriting.

Personal interviews, reference letters, college transcripts, and college references are methods, other than tests, used in determining the abilities of applicants for the positions of accountant, accounting clerk, and record keeper.

10. Do the selected companies offer any type of assistance to accountant, accounting clerk, and record-keeper employees who wish to continue their education?

Two companies pay the tuition of their office employees who successfully complete approved courses, and two companies pay two-thirds of the tuition of their office employees who successfully complete approved courses. The remaining 10 companies offer no assistance to their office employees who wish to continue their education.

## CONCLUSIONS

On the basis of data gathered, analyzed, and interpreted in this study, it is believed that the following conclusions are justified:

Instruction and training in the operation of adding machines and calculating machines should be given to students who wish to enter employment as accountants, accounting clerks, or record keepers in offices of oil companies.

Beginning accountants, accounting clerks, and record keepers are reported by 50 per cent or more of the personnel managers to be frequently deficient in the subject matter areas of grammar, punctuation, spelling, penmanship, and speech.

The frequency with which personnel managers find new accountants, accounting clerks, and record keepers deficient is too high. These employees need to develop their personal traits, with special emphasis on the following: Organization of duties, initiative, judgment, and the ability to follow instructions.

Beginning accountants, accounting clerks, and record keepers need additional training in composing business letters. The beginning employees have proved satisfactory in the performance of accounting duties.

"Pipe-line accounting," "oil and gas accounting," "oil and gas laws," "accounting for operation of joint-interest properties," and "refining, marketing, and exploration" are suggested by 1 or more of 5 personnel managers as special training which should be given to prospective oil company accountants, accounting clerks, and record keepers.

The numbers of newly employed accountants, accounting clerks, and record keepers indicate that approximately 246 positions become available for high school and college graduates during a normal business year. The numbers of newly employed accountants, accounting clerks, and record keepers



will remain approximately the same during the next 5 years if the estimates of the personnel managers proves accurate.

The minimum education requirement for new accountants is college graduation. The minimum education requirement for new accounting clerks is at least business college or junior college graduation. The minimum education requirement for new record keepers is at least high school graduation. Under present labor-market conditions, several personnel managers indicated that their companies are able to fill vacancies in all 3 classifications with college graduates.

In addition to meeting the minimum education requirement, the new accountants, accounting clerks, and record keepers are required to be "semi-skilled" in the operation of the adding machine and the calculating machine.

Beginning accountants, accounting clerks, and record keepers are required to have previous accounting experience in the same or closely related fields.

Employees in the classifications of accountant, accounting clerk, and record keeper perform a variety of accounting and clerical duties in addition to those duties given in the definitions in Chapter I.

Accounting vacancies are filled by promoting employees from positions at the accounting clerk level, or--in the case of 2 companies only--by employing new accountants. The position of accounting clerk is filled by promoting from the record-keeping level or--in 9 companies only-- by employing new accounting clerks. Record keepers are employed from outside the company or promoted from lesser office positions.

A ladder of positions exists for prospective accountants, accounting clerk, and record keeper employees of oil companies to climb. This ladder

starts with the record-keeping positions; proceeds to the accounting clerk positions; moves to the positions at the accountant level; and finally, for some prospective employees, extends up to executive positions in these oil companies.

All of the oil companies maintain company employment departments which serve most of the companies as the first medium in locating prospective new accountants, accounting clerks, and record keepers.

Employment tests are given by the majority of oil companies to applicants for positions as accounting clerk and record keeper. The abilities and traits most frequently tested by these employment tests are intelligence, clerical ability, personality, clerical aptitude, and typewriting.

Personal interviews, reference letters, college transcripts, and college contacts are other methods used in determining the abilities of applicants for positions as accountant, accounting clerk, and record keeper.

#### RECOMMENDATION

As a check upon the validity of the findings of this study, it is suggested that an investigation be made of the qualifications of newly employed accountants, accounting clerks, and record keepers in oil companies, the data to be obtained from the employees themselves or from company records which show the qualifications of the employees at time of employment.

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APPENDIX



# DEFINITIONS

Accountant - Devises or executes previously devised accounting systems to meet the needs of a particular concern: prepares financial statements, audits books, and does other accounting work as business requires; assumes responsibility for accuracy of the books after the audit.

Accounting Clerk - Performs the more routine calculating, typing and posting duties necessary in accounting: checks items on various reports, summarizing and posting the data to designated books; performs a variety of other clerical duties, such as making up invoices or monthly statements to be sent to customers, preparing pay rolls, verifying the company bank account, keeping files of various records, making up a periodic report of the company's business activities, and listing and checking detail as instructed.

Record-Keeper - Keeps a record of and works with only one phase or section of a complete set of records pertaining to business transactions, such as the accounts receivable or the accounts payable section, performing other bookkeeping duties..... May be specifically designated according to section of records kept, as Accounts-Payable Bookkeeper; or Accounts-Receiveable Bookkeeper.

## INTERVIEW SCHEDULE

### Personal Qualifications.

Type of Office Employee	Number of Employees		Minimum Age at Which Employees Will be Hired		Previous Accounting or Bookkeeping Experience			Marital Status Preferred		
	Men	Women	Men	Women	Required	Preferred	Immaterial	Married	Single	Either
								M W	M W	M W
Accountants										
Accounting Clerks										
Record-Keepers										

### Educational Qualifications.

Type of Office Employee	Minimum Educational Qualifications Required							
	High School Graduate		Business College Graduate		Junior College Graduate		College Graduate	
	M	W	M	W	M	W	M	W
Accountants								



I. During a normal business year, what is the approximate number of new employees hired to fill the following positions:

1. Accountants \_\_\_\_ 2. Accounting Clerks \_\_\_\_ 3. Record-Keepers \_\_\_\_

Do you for any reason expect this number to change within the next five years?

Yes \_\_\_\_ No \_\_\_\_

If "Yes," do you expect the number of accountant positions to be increased \_\_\_\_ or decreased \_\_\_\_?

Do you expect the number of accounting clerk positions to be increased \_\_\_\_ or decreased \_\_\_\_?

Do you expect the number of record-keeper positions to be increased \_\_\_\_ or decreased \_\_\_\_?

IV. Are accountant, accounting clerk, and record-keeper vacancies filled by new employees or are they filled by present employees on a promotional basis?

	1. Accountants	2. Accounting Clerks	3. Record-Keepers
(Filled by)			
a. New Employees	_____	_____	_____
b. Present Employees	_____	_____	_____
c. Both	_____	_____	_____

If filled by promotion of present employees, from which office positions are the new accountants, accounting clerks, and record-keepers promoted? (Give specific job classifications, as "clerk-typist," "clerk, general," and so forth; and list in the order of frequency.)

1. Accountants (Promoted from)	2. Accounting Clerks (Promoted from)	3. Record-Keepers (Promoted from)
a. _____	a. _____	a. _____
b. _____	b. _____	b. _____

To what positions are present accountants, accounting clerks, and record-keepers promoted?

1. Accountants (Promoted to)	2. Accounting Clerks (Promoted to)	3. Record-Keepers (Promoted to)
a. _____	a. _____	a. _____
b. _____	b. _____	b. _____

V. Which of the following media are used in locating prospective accountant, accounting clerk, and record-keeper employees? (Indicate the order of frequency in which the agencies are used.)

1. Company Employment Department	_____	5. College and/or High School Employment Bureaus	_____
2. Private Employment Agencies	_____	6. Personal acquaintances, Friends, or Relatives	_____
3. U. S. Employment Agencies	_____	7. Other:	_____
4. Newspaper Advertisements	_____		

- I. Are employment tests given to prospective accounting, accounting clerks, and record-keeper employees? Yes \_\_\_\_\_ No \_\_\_\_\_

If "Yes," what is the nature of the tests? (Such as intelligence tests, aptitude tests, personality tests, achievement tests, and so forth.)

Indicate after each test whether it is a commercially prepared test. (Indicate by "A") or a company prepared test (Indicate by "B").

1. Accountants  
(Tests given to)

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

2. Accounting Clerks  
(Tests given to)

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

3. Record-Keepers  
(Tests given to)

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

Other methods of determining skills.

1. Accountants

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

2. Accounting Clerks

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

3. Record-Keepers

- a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_  
d. \_\_\_\_\_

- II. Training Qualifications of beginning accountant, accounting clerk, and record-keeper employees.

1. Office Machines Training.

What degree of skill is required in operating the following office machines?

	Skilled			Semi-Skilled*			No Training Required		
	Acct	AC	RC	Acct	AC	RC	Acct	AC	RC
a. Adding machines .....									
b. Calculating machines .....									
c. Other: _____									
_____									

\*Semi-skilled is used here to describe workers who have an elementary knowledge of the operation of the machine and its fundamental applications, but whose operating skill is below that required of a specialized operator.



## II. Training Qualifications, Continued.

2. Previous Accounting Experience. (Experience in the same or closely related fields necessary to meet the minimum qualifications of the job.)

	Accountant	Clerk	Accounting Record- Keeper
--	------------	-------	------------------------------

a. Six months or less.

_____	_____	_____
-------	-------	-------

b. Up to and including one year.

_____	_____	_____
-------	-------	-------

c. Up to and including two years

_____	_____	_____
-------	-------	-------

d. Over two years.

_____	_____	_____
-------	-------	-------

3. Training Period. (The time required in training on the job with your company for the average employee to reach acceptable proficiency.)

	Accountant	Clerk	Accounting Record- Keeper
--	------------	-------	------------------------------

a. Three months or less.

_____	_____	_____
-------	-------	-------

b. Up to and including six months.

_____	_____	_____
-------	-------	-------

c. Up to and including one year.

_____	_____	_____
-------	-------	-------

d. Over one year.

_____	_____	_____
-------	-------	-------

- I. What duties, other than those included in the definitions of an accountant, an accounting clerk, and a record-keeper given at the beginning of this questionnaire, are performed by beginning accountants, accounting clerks, and record-keepers by your company?

- |                         |                               |                            |
|-------------------------|-------------------------------|----------------------------|
| 1. Accountants' Duties: | 2. Accounting Clerks' Duties: | 3. Record-Keepers' Duties: |
|-------------------------|-------------------------------|----------------------------|

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

1. Does your company offer assistance to employees who wish to get more education?  
Yes \_\_\_\_\_ No \_\_\_\_\_

If "Yes," of what does this assistance consist? \_\_\_\_\_

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2. Is there special training, peculiar only to the oil industry, which is not usually given in high school and/or college accounting courses but which should be included in such courses? Yes \_\_\_\_\_ No \_\_\_\_\_

If "Yes," of what should such training consist?

Record-Keepers \_\_\_\_\_

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Accounting Clerks \_\_\_\_\_

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Accountants \_\_\_\_\_

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3. How often do you find beginning accountant, accounting clerk, and record-keeper employees deficient in the following abilities and traits? (Answer in terms of duties that beginning accountants, accounting clerks, and record-keepers are expected to be able to perform. Whenever a comment does not apply to the three types of employees, indicate by writing "Acct" for the accountant, "A.C." for accounting clerk, "R.C." for record-keeper in the appropriate blank.)

Fields of Instruction and Training	Frequently	Occasionally	Rarely	Never
1. Office Machines.				
Operating the following machines:				
a. Adding Machines.....				
b. Calculating Machines.....				
c. Addressing Machines.....				
d. Other: _____				
_____				
_____				
_____				



(Continued)

Fields of Instruction and Training	Frequently	Occasionally	Rarely	Never
2. Subject Matter .....				
a. Grammar .....				
b. Punctuation.....				
c. Spelling.....				
d. Arithmetic.....				
e. Penmanship.....				
f. Speech:				
(1) Manner of Delivery.....				
(2) Tone of Voice.....				
(3) Enunciation.....				
g. Accounting skills.....				
h. Filing.....				
i. Other: .....				
.....				
.....				
.....				
3. Office Duties.				
a. Using a typewriter.....				
b. Filing.....				
c. Answering the telephone.....				
d. Meeting and directing office callers.....				
e. Composing business letter...				
f. Accounting duties.....				
g. Other: .....				
.....				
.....				
.....				
4. Personal Traits.				
a. Attention to details.....				
b. Organization of duties.....				
c. Ability to follow instructions.....				
d. Ability to get along with other people.....				
e. Grooming.....				
f. Tact.....				
g. Honesty.....				
h. Dependability.....				
i. Ambition.....				
j. Alertness.....				
k. Industry.....				
l. Accuracy.....				
m. Loyalty.....				
n. Courtesy.....				
o. Initiative.....				
p. Judgement.....				
q. Other: .....				
.....				
.....				

Typist

Gordon F. Culver